

AD-A109 606

NAVAL POSTGRADUATE SCHOOL MONTEREY CA

F/G 5/1

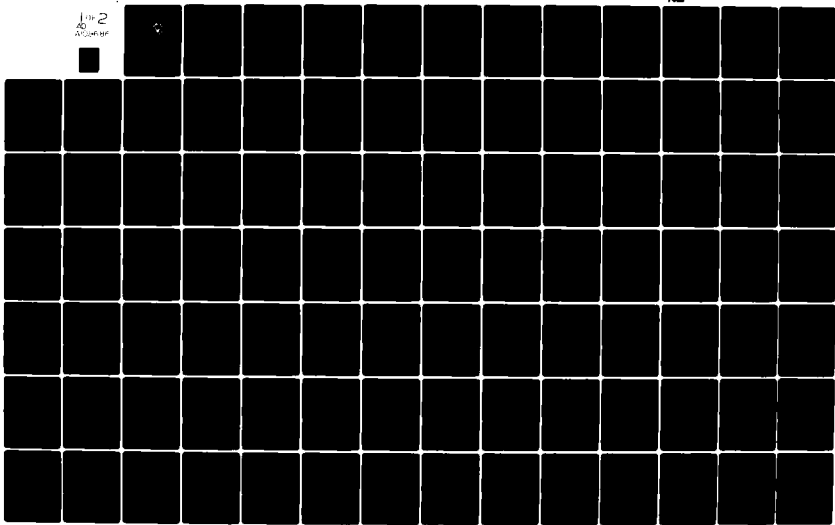
PROPOSED SYSTEM FOR THE USE OF EVALUATION FACTORS IN THE SOURCE--ETC(U)

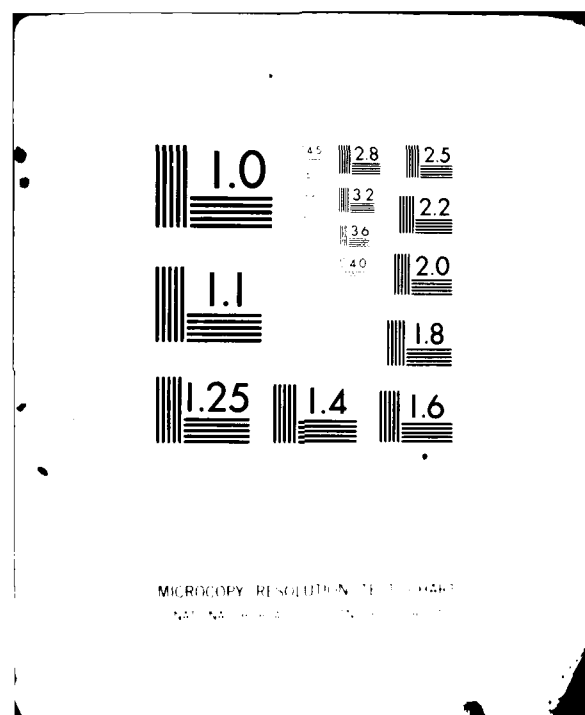
*unclassified*

SEP 81 R D PINDEL

NL

1 of 2  
20  
AD-A109 606





AD A109686

LA II (2)

# NAVAL POSTGRADUATE SCHOOL

Monterey, California



## THESIS

PROPOSED SYSTEM FOR THE USE OF EVALUATION FACTORS  
IN THE SOURCE SELECTION OF SERVICE CONTRACTORS

by

Richard Douglas Pingel

September 1981

Thesis Advisors:

M. L. Sneiderman  
R. G. Nickerson

Approved for public release; distribution unlimited.

DTIC FILE COPY

62 34 11 172

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER	2. GOVT ACCESSION NO. AD-110761	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) Proposed System for the Use of Evaluation Factors in the Source Selection of Service Contractors		5. TYPE OF REPORT & PERIOD COVERED Master's Thesis; September 1981
7. AUTHOR(s)  Richard Douglas Pingel		6. PERFORMING ORG. REPORT NUMBER
9. PERFORMING ORGANIZATION NAME AND ADDRESS Naval Postgraduate School Monterey, California 93940		8. CONTRACT OR GRANT NUMBER(s)
11. CONTROLLING OFFICE NAME AND ADDRESS Naval Postgraduate School Monterey, California 93940		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office)		12. REPORT DATE September 1981
		13. NUMBER OF PAGES 113
		15. SECURITY CLASS. (of this report)  Unclassified
		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE
16. DISTRIBUTION STATEMENT (of this Report) Approved for public release; distribution unlimited.		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)		
18. SUPPLEMENTARY NOTES		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number) Contracted Services                      Source Selection Contractor Evaluations                  Technical Evaluations Evaluation Techniques Proposal Evaluations Service Contract		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Technical personnel are increasingly being required to perform vital functions as proposal evaluators in the source selection process for which they have not properly been trained. This research effort provides a comprehensive system for source selection using price and other factors in a form aimed at the technical professionals that support field acquisition activities. All examples selected are from the general acquisition area of service		

DD FORM 1473  
1 JAN 73EDITION OF 1 NOV 68 IS OBSOLETE  
S/N 3102-014-6601

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE/When Data Entered

contracting. The system consists of the basic considerations necessary for preparation of a procurement request, the basic elements of a source selection plan, selection of a technical evaluation panel, selection of evaluation factors for service contractors, preparation of negotiation objectives, the actual conduct of evaluations and negotiations, and debriefing of unsuccessful offerors.

Account for	
NO	X
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	
26	
27	
28	
29	
30	
31	
32	
33	
34	
35	
36	
37	
38	
39	
40	
41	
42	
43	
44	
45	
46	
47	
48	
49	
50	
51	
52	
53	
54	
55	
56	
57	
58	
59	
60	
61	
62	
63	
64	
65	
66	
67	
68	
69	
70	
71	
72	
73	
74	
75	
76	
77	
78	
79	
80	
81	
82	
83	
84	
85	
86	
87	
88	
89	
90	
91	
92	
93	
94	
95	
96	
97	
98	
99	
100	

A

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE/When Data Entered

Approved for public release; distribution unlimited.

Proposed System for the Use of Evaluation Factors  
in the Source Selection of Service Contractors

by

Richard Douglas Pingel  
Lieutenant Commander, United States Navy  
B.S., Iowa State University, 1969

Submitted in partial fulfillment of the  
requirements for the degree of

MASTER OF SCIENCE IN MANAGEMENT

from the

NAVAL POSTGRADUATE SCHOOL  
September 1981

Author

*Richard Douglas Pingel*

Approved by:

*W. L. Friedman*

Thesis Advisor

*Robert G. Tuck*

Co-Advisor

*Dir. L.*  
Chairman, Department of Administrative Science

*W. J. Woods*  
Dean of Information and Policy Sciences

## ABSTRACT

Technical personnel are increasingly being required to perform vital functions as proposal evaluators in the source selection process for which they have not properly been trained. This resource effort provides a comprehensive system for source selection using price and other factors in a form aimed at the technical professionals that support field acquisition activities. All examples selected are from the general acquisition area of service contracting. The system consists of the basic considerations necessary for preparation of a procurement request, the basic elements of a source selection plan, selection of a technical evaluation panel, selection of evaluation factors for service contractors, preparation of negotiation objectives, the actual conduct of evaluations and negotiations, and debriefing of unsuccessful offerors.

## TABLE OF CONTENTS

I.	INTRODUCTION -----	12
A.	GENERAL -----	12
B.	STATEMENT OF THE PROBLEM -----	13
C.	RESEARCH OBJECTIVE -----	13
D.	RESEARCH QUESTION -----	14
E.	SCOPE, LIMITATIONS, AND ASSUMPTIONS -----	14
	1. Scope -----	14
	2. Limitations -----	14
	3. Assumptions -----	15
F.	METHODOLOGY -----	15
	1. Literature Search -----	15
	2. Legal Search -----	15
	3. Major Activity Source Selection Guides -----	16
	4. Personal Interviews -----	16
II.	SOURCE SELECTION METHODS -----	17
A.	BASIC CONSIDERATIONS -----	17
B.	SOURCE SELECTION METHODS -----	18
	1. Type of Contract -----	18
	2. Qualification Factors -----	20
	3. Evaluation Factors -----	21
C.	THE SOURCE SELECTION PLAN (SSP) -----	21
	1. Basic Elements -----	22
	2. Preproposal Conference -----	23



3.	Independent Cost Estimate (ICE)	23
4.	Source Selection Plan Milestones	24
D.	THE STATEMENT OF WORK (SOW)	25
1.	Impact	25
2.	Matching SOW and SSP	26
3.	Writing the SOW to a Standard	27
E.	TECHNICAL EVALUATION PANEL (TEP)	28
1.	Establishing a TEP	28
2.	Standards of Conduct	29
3.	Basic Duties	31
III.	MULTI-ATTRIBUTE UTILITY MEASUREMENT (MAUM)	33
A.	PURPOSE	34
B.	SIMPLE MULTI-ATTRIBUTE RATING TECHNIQUE (SMART)	34
C.	ELEMENTS OF SMART SYSTEM	37
1.	Step One	37
2.	Step Two	37
3.	Step Three	37
4.	Step Four	38
5.	Step Five	41
6.	Step Six	41
7.	Step Seven	43
8.	Step Eight	45
9.	Step Nine	50
10.	Step Ten	50

IV.	GOVERNMENT CONSTRAINTS -----	52
	A. SUMMARY OF THE RULES -----	52
	B. PROTECTIVE FUNCTION OF SBA -----	57
V.	EVALUATION OF SERVICE CONTRACTORS -----	59
	A. PURPOSE -----	59
	B. GENERAL GUIDELINES -----	59
	C. SPECIFIC GUIDELINES -----	60
	1. Technical -----	60
	2. Key Personnel -----	61
	3. Management and Business -----	64
	4. Experience and Past Performance -----	66
	5. Cost/Price -----	67
	D. TESTING THE EVALUATION FACTORS -----	69
	E. THE FINAL EVALUATION PLAN -----	70
	F. PROPOSAL PREPARATION GUIDANCE -----	72
	G. PREPROPOSAL CONFERENCE -----	74
VI.	CONDUCTING THE EVALUATION -----	75
	A. PURPOSE -----	75
	B. TEP FAMILIARIZATION -----	75
	C. RECEIPT AND BREAKOUT OF PROPOSALS -----	76
	D. INITIAL EVALUATION -----	77
	1. Qualification Factors -----	77
	2. Grossly Deficient Proposals -----	77
	E. IN-DEPTH EVALUATION -----	78
	1. Considerations during Evaluation -----	78
	2. Errors, Omissions and Deficiencies -----	79

3.	The Evaluation -----	80
4.	Requests for Additional Information -----	81
5.	Cost/Price Considerations -----	82
a.	Cost/Price Analysis -----	82
b.	Cost Realism/Probable Cost -----	84
F.	RESULTS OF INITIAL EVALUATION -----	86
1.	Award on Initial Proposals -----	86
2.	First Technical Evaluation Report (TER) ----	87
3.	Competitive Range Determination -----	89
G.	CONDUCTING THE NEGOTIATIONS -----	90
1.	Development of Negotiation Objectives -----	90
2.	Strategies and Tactics -----	92
3.	Best and Final (B&F) -----	93
H.	FINAL EVALUATION AND DOCUMENTATION -----	95
I.	ULTIMATE RESPONSIBILITY FOR SOURCE SELECTION ---	96
J.	UNSUCCESSFUL OFFERORS -----	97
1.	Notification -----	97
2.	Debriefing -----	97
VII.	SUMMARY AND RECOMMENDATIONS -----	99
A.	SUMMARY -----	99
1.	Phase I Pre-Procurement Request -----	99
2.	Phase II Pre-Solicitation -----	102
3.	Phase III Solicitation -----	103
4.	Phase IV Evaluation -----	103
5.	Phase V Source Selection -----	104
B.	RECOMMENDATIONS -----	104

LIST OF REFERENCES ----- 107

INITIAL DISTRIBUTION LIST ----- 112

## LIST OF FIGURES

FIGURE 1:	Disclosure of Source Selection Information Statement -----	30
FIGURE 2:	Conflict of Interest Statement -----	30
FIGURE 3:	Step Four Identify the Relevant Evaluation Factors -----	39
FIGURE 4:	Step Five Rank the Factors in Relative Order of Importance -----	42
FIGURE 5:	Step Six Assign Weights to Each Evaluation Factor -----	44
FIGURE 6:	Step Seven Normalize the Weights and Calculate the Final Assignment -----	46
FIGURE 7:	Step Eight Scoring and Rating the Proposals -----	49
FIGURE 8:	Step Nine Aggregate -----	51
FIGURE 9:	Key Personnel Requirements Clause -----	63
FIGURE 10:	Model of Major Events in Source Selection ----	100

## LIST OF ABBREVIATIONS

ADPE	Automatic Data Processing Equipment
B&F	Best and Final
DAR	Defense Acquisition Regulations
DCAA	Defense Contract Audit Agency
DOL	Department of Labor
FOIA	Freedom of Information Act
FP(IQ)-W/AA	Fixed Price, Indefinite Quantity with Award Amount
GAO	General Accounting Office
GFM	Government Furnished Material
ICE	Independent Cost Estimate
MAUM	Multi-Attribute Utility Measurement
NFAS	Navy Field Acquisition System
PALT	Procurement Administrative Leadtime
PR	Procurement Request
R&D	Research and Development
RFP	Request for Proposals
SBA	Small Business Administration
SMART	Simple Multi-Attribute Rating Technique
SOW	Statement of Work
SSP	Source Selection Plan
TEP	Technical Evaluation Plan
TER	Technical Evaluation Report

## I. INTRODUCTION

### A. GENERAL

In the past ten years Navy technical personnel have been increasingly required to be contract administrators and proposal evaluators. This fact has been clearly recognized at major technical activities such as the Naval Weapons Center, China Lake. Senior contract specialist positions have been established in several of the major technical departments to provide liaison with the acquisition personnel and to provide guidance in contract administration and proposal evaluation [1]. However, most activities supported by the Navy Field Acquisition System (NFAS) cannot afford the luxury of providing technical personnel with contracting advisors. Nevertheless, the technical personnel are expected to perform as vital members of the contracting team.

The Department of Defense does provide a one week course on "Defense Contracts Management for Technical Personnel" that covers the complete acquisition life cycle [2:1]. Since a significant number of technicians and engineers are unable to attend this course, the Navy goes one step further and provides a one week course for "Contracting Officer's Technical Representative (COTR)." The COTR course was specifically developed to train technical personnel in contract administration and is often given on site. However, it lightly touches the area of

proposal evaluation [3:II-5]. Interviews with NFAS personnel confirm that a void exists in the training of technical personnel in proposal evaluation [4].

#### B. STATEMENT OF THE PROBLEM

Poorly planned, defined, conducted, and documented proposal evaluations have contributed to the following:

- a. contractor dissatisfaction resulting in disputes, protests and claims [5:3-49].
- b. qualified contractors deciding not to submit proposals or submitting inadequate proposals [5:3-49].
- c. long procurement administrative leadtimes [6:I-1].
- d. frustration of technical personnel [6:1].
- e. selection of unsatisfactory contractors (5:3-49].
- f. difficulty in defending selection of contractors to the General Accounting Office (GAO) [5:3-50].

#### C. RESEARCH OBJECTIVE

The objective of this research effort is to develop a comprehensive system for the source selection of service contractors using price and other factors. This source selection system is to be developed with the technical members of the evaluation panel in mind.

Service contracts were selected because individuals interviewed reported service contracts as the most common area to use evaluation factors other than price. It is important to note that this research effort does not address modes of evaluation. It will address the planning, defining, conducting, aggregating, documenting, and use of evaluation efforts in the source selection process.



#### D. RESEARCH QUESTION

What constitutes a thorough and impartial source selection system using price and other factors that is suitable for use as a standard in service contracting within the Navy Field Acquisition System?

#### E. SCOPE, LIMITATIONS, AND ASSUMPTIONS

##### 1. Scope

A broad definition of service contracts is used to include any requirement for a contractor's time and effort rather than for a concrete end item. Examples of contracting actions that typically would require proposal evaluation using price and other factors are:

- a. expert and consultant services.
- b. services for the operation of Government owned facilities and systems.
- c. engineering and technical services.
- d. research and development (R&D) services.
- e. automatic data processing equipment (ADPE) services.

##### 2. Limitations

Contracts for services that are acquired using small purchase procedures are specifically excluded. Major weapons systems related service acquisitions are excluded because the proposal evaluations are often supported by complex, computer models.

### 3. Assumptions

It is assumed that the reader has a technical background and only a minimal understanding of Government contracting.

## F. METHODOLOGY

### 1. Literature Search

A comprehensive search was conducted of the literature base for applicable studies and articles in the areas of source selection and decision and policy analysis. Information was obtained primarily from the Naval Postgraduate School library and the Defense Logistics Information Center, Fort Lee, VA.

### 2. Legal Search

The primary legal search method was a detailed review of the Quarterly Digests of Unpublished Decisions of the Comptroller General of the United States and the published Decisions of the Comptroller of the United States. A secondary method was a computer search using key words of all GAO decisions. This service was provided by the Federal Legal Information Through Electronics, Denver, CO. The legal search concentrated on GAO decisions due to the pre-award nature of proposal evaluations. GAO decisions are issued in response to protests submitted by contractors to appeal the actions of a contracting officer. Very seldom do contractors appeal to the courts concerning proposal evaluations. A computer search of federal court decisions was very unproductive.

### 3. Major Activity Source Selection Guides

An effort was made to collect as many major activity source selection guides, handbooks or instructions as possible.

Examples of documents collected are:

- a. U. S. Department of Energy, "Procurement Regulation Handbook," 30 June 1979.
- b. National Aeronautics and Space Administration, "Source Evaluation Board Manual," change 2, 25 January 1980.
- c. U. S. Army Material Development and Readiness Command, "Contract Management Guidance for Technical Personnel," advanced copy.
- d. "Source Selection Process Handbook for the Air Force Space Division," May 1980.
- e. Naval Air Development Center, Warminster, "The Preparation and Processing of Purchase Requests," undated.

### 4. Personal Interviews

Finally, visits were made to the Naval Supply Center, Oakland and to the Naval Regional Contracting Office, Long Beach. Personal interviews were conducted of contract specialists, management personnel and legal counsel. The purpose of the interviews was to identify and evaluate proposal evaluation techniques and procedures currently being used.

## II. SOURCE SELECTION METHODS

Nothing in contract management is more important than an informed start. Created by early communications between informed personnel, it greatly improves the probability of an uneventful procurement. The usual result is a shortened cycle for the award of a contract and a greater potential for satisfactory performance by a thoroughly evaluated contractor. [6:1]

### A. BASIC CONSIDERATIONS

An informed start begins with the consideration of the full spectrum of source selection methods on each procurement. The most basic consideration is whether the procurement is sole source or competitive. This is a formal determination that must be approved by the contracting officer. The complexity of the service being acquired often dictates a need for more complex source selection procedures. The time available for specification development and procurement action may limit the options available. The availability of personnel that might be part of the Government evaluation team may be a constraint. A very real limitation may be the availability of sources in private industry that are capable of providing the required services. Of course, a vital consideration is the estimated dollar value of the procurement which may control the cost-benefit of investing expensive

administrative effort into source selection. This list of basic considerations is not comprehensive and is provided only as a start.

## B. SOURCE SELECTION METHODS

### 1. Type of Contract

In acquiring services where technical or engineering competency is not the controlling factor, source selection in terms of price alone may be sufficient. Award may be made to the lowest responsive and responsible offeror and a pre-award survey may be relied upon to assist in these determinations [2:18]. A small business may appeal a negative responsibility determination to the Small Business Administration (SBA) which may issue a Certificate of Competency. This document for all intent and purposes is a conclusive determination of positive responsibility.

When to use evaluation factors in service contracting is a subject of much heated debate and contradictory opinions. One extreme view is that evaluation factors are appropriate for all service contracts because a special skill can always be identified. Examples given were contracts for moving and storage [7] and for mess attendant contracts [8]. A much more conservative view was taken by legal counsel interviewed who expressed a concern for the use of evaluation factors on any fixed price contracts [9]. GAO has provided some guidance on these questions and has consistently held that evaluation factors may be used in source selection on fixed price contracts

and especially on cost type contracts. Particularly, when the Government "is seeking creativity and innovation rather than manpower thus making factors other than price paramount" [10].

The fact is that a service requirement may lend itself to the use of a fixed price contract. If a suitable contractor can be obtained by considering pricing alone, then considerable saving can be obtained in contractor proposal costs, Government administrative cost and time. For that reason the Naval Regional Contracting Office, Long Beach, has been instrumental in developing a new contract type currently being used in mess attendant contracts. The Fixed Price, Indefinite Quantity with Award Amount (FP(IQ)-W/AA) type contract was developed to counter the negative effects of heavy competition without the use of evaluation factors. It recognizes the fact that the bulk of the contract is for manpower that has very little variation from contractor to contractor. The contractor is required to pay employees at least the prevailing wage rate as set by the U. S. Department of Labor (DOL) and seldom does a contractor pay more. Therefore, the FP(IQ)-W/AA type contract establishes a fixed service rate based on the DOL wage determination and the contractor invoices for each service unit delivered. For mess attendant contracts, the service unit is manhours of food service attendant services delivered.

All management functions are grouped under a separate item entitled "Management and Support Price." Award is made

to the responsive and responsible bidder that submits the lowest bid for Management and Support Price. A separate award mechanism is used to motivate the contractor to provide quality service. At no time are evaluation factors used in the source selection process.

However, desire to use a fixed price contract does not mean that evaluation factors are not appropriate. Educational services are a common example. Required expertise is clearly identifiable and finite end products can be established on a per course or per student basis. [7]

### 2. Qualification Factors

Another method of source selection is the use of special standards of responsibility or qualification factors. These are go-no go factors such as the geographical location of facilities, degree of licensing requirements of key personnel or specific experience in a specialized field of operations [2:17]. Qualification factors should be objectively verifiable and judgment should not be a significant requirement [11].

Qualification factors may be used alone or in conjunction with evaluation factors. When used with evaluation factors, they should be set out separately and clearly identified. Mixing qualification factors with evaluation factors may delay the start of procurement action [6:I-1]. The use of qualification factors in this manner serves to notify potential contractors of the minimum qualifications and resources necessary

to perform the proposed work of a given procurement. Offerors who do not possess these requirements should not be encouraged to incur proposal and other expenses involved in a competitive submission. [12:4-2]

### 3. Evaluation Factors

In the evaluation-factor method, the Government activities have broad latitude in determining the evaluation factors and the proposal evaluation method to be utilized. The only requirements are that the evaluation method provide a rational basis for source selection and that the evaluation itself be conducted in good faith and in accordance with the announced evaluation factors in the RFP. Most NFAS activities utilize numerical point ratings in an attempt to quantify what is essentially a subjective judgment. However, neither GAO nor procurement regulations require that proposals be evaluated on the basis of numerical scores. [13]

There are other source selection methods such as two step formal advertising which are rarely used in service contracting [11].

#### C. THE SOURCE SELECTION PLAN (SSP)

A formal document that is seldom used by NFAS activities, at least by this title, but which is commonly used in major weapons systems acquisition, is the Source Selection Plan (SSP) [14:7]. In short, a SSP is the Government's statement to itself as to how it intends to purchase what it wants.



Most NFAS activities do not require such a document because most procurement actions do not have a complex source selection procedure and the benefits do not warrant the added administrative burden [11]. However, several individuals interviewed agreed that the use of a SSP would be warranted for source selection on high dollar value service contracts. The extent and detail of the SSP would increase with the complexity and potential for protest [15].

The SSP is a major component of the total acquisition plan and therefore must be taken into consideration during the earliest steps of the acquisition process. In service contracting, the other major component is the statement of work (SOW). Ideally, the SOW and SSP should be developed concurrently. This is the first example of the need for early information flow and teamwork between the technical and contracting personnel. The need for teamwork certainly does not end here, but must extend through the entire source selection process. Teamwork is the most vital prerequisite to the success of any acquisition. [2:45]

#### 1. Basic Elements

The basic elements of the SSP are: [16:3-3]

- a brief description of the acquisition.
- identification of the innovation or expertise required.
- proposed composition of the technical evaluation panel (TEP).
- proposed evaluation factors and weights.

- rating or scoring technique.
- intent to use preproposal conference.
- summary of independent cost estimate (ICE).
- proposed milestones.

## 2. Preproposal Conference

Preproposal conferences are a valuable tool and they are often used by NFAS activities [11]. They serve to provide valuable background material and to clarify complex SOW and RFP provisions. SOW and RFP inconsistencies may be surfaced and corrected prior to proposal submission. The result can be a significant savings in time and administrative effort as compared to individual sequential visits. It is important that all Government personnel be completely briefed prior to the conference and an accurate record be made of the conference proceedings. [16:3-19]

## 3. Independent Cost Estimate (ICE)

Careful consideration should be made towards the development of an ICE. There is a definite relationship between the Government's ability to develop an accurate ICE and the problems which will be encountered later in the source selection process. An ICE is important because it will enhance the identification of potential funding problems as well as "buy-ins." A "buy-in" is where the offeror purposely underestimates on a cost type contract and plans on subsequent cost overruns should he be awarded the contract [16:3-8]. GAO has made attempts to require that an ICE be developed for every

acquisition that may require a detailed cost/price analysis [17]. However, an ICE is expensive and time consuming to prepare and NFAS activities do not prepare an ICE for every acquisition [7].

#### 4. Source Selection Plan Milestones

Reasonable milestones should be established for the following critical events:

- issuance of the RFP.
- receipt of proposals.
- competitive range determination.
- receipt of Best and Final (B&F).
- contract award.

It is important that sufficient time be given to both Government personnel and contractor personnel for each step in the contracting process. Undue compression of the contracting process can discourage competition, restrict innovation, and increase errors in proposals and evaluations [8]. Naval Regional Contracting Office, Long Beach, studies have shown that the most time consuming effort is the evaluation by the requiring activity. Also, there have been extensive delays in issuing the RFP and in the receipt of proposals due to RFP amendments [11]. Again, teamwork is the key to meeting the milestone dates.

#### D. STATEMENT OF WORK

A statement of work (SOW) is a document that describes accurately the nonspecification requirements of a job or work effort including the standards used to determine whether the requirements have been met [18:4]. The function of a SOW is to articulate, as straightforwardly and unambiguously as possible, the requirements that will lead to the performance of work that achieves job or work effort objectives [6:II-1]. This is a tough and slippery area and unless one understands the nature of services contracting it can be troublesome [6:III-11].

This research effort does not include the development of a SOW. Detailed guidance may be obtained in the Department of Defense military handbook MIL-HDBK-245A (NAVY) dated 1 August 1978 entitled "Preparation of Statement of Work (SOW)." Also, Office of Federal Procurement Policy Pamphlet No. 4 entitled "A Guide to Writing and Administering Performance Statements of Work for Service Contracts" provides guidance.

##### 1. Impact

The SOW plays a critical role throughout the entire source selection process. It impacts the type of contract selected, the decision of offerors to propose, the credibility of proposed cost or price, the usefulness of the SSP, and the level of resentment of unsuccessful offerors [6:II-2]. A clearly written SOW will allow offerors to understand the

Government requirement and respond with detailed plans and approaches for accomplishment of the tasks specified. It will allow offerors to make reasonable estimates of the resources which will be required to satisfy the Government's requirements. A poorly written SOW is misleading and presents a poor image to private industry [19:28]. The RFP may be delayed as contracting personnel and technical personnel attempt to upgrade the SOW. The receipt of proposals may be delayed due to extensive offeror questions and resulting amendments to the RFP. Finally, the evaluation and award may be delayed due to wide variations in proposals and lengthy negotiations to clarify the requirement. Often, a contractor may build in costly contingency allowances if a clear and definite SOW is not provided [5:3-15]. A well defined service can be acquired using a fixed price or incentive type contract, while the inadequately defined service often uses time and material or cost type contracts.

## 2. Matching SOW and SSP

It is extremely important that the SOW and SSP be carefully matched to each other. Normally, the first two steps taken by a prospective offeror in examining an RFP is to read the SOW and proposed evaluation factors [6:IV-2]. The most common mismatch is when the SOW clearly describes a normal work effort that can be performed by personnel trained to one level of expertise, but the evaluation factors are established for a worst case situation and indicate a much

higher level of expertise. This has become a very common area for protest by unsuccessful offerors. Although this type of protest is very difficult for an offeror to win, it does cause delays and considerable Government administrative effort and frustration [15].

If there is a mismatch between the SOW and the evaluation factors, an experienced contractor will direct his proposal towards the evaluation factors [11]. If the SOW is inherently spongy, the contractor may direct his proposal specifically at the evaluation factors, win the award and then take off in pursuit of expanding the scope of work during performance or cutting back on the work effort [6:II-3]. This can lead to considerable follow on contract administration problems.

### 3. Writing the SOW to a Standard

A standard is defined as an acknowledged measure of comparison. A standard in order to be useful must be measurable. A SOW must not only describe a particular work effort, but must describe that work in terms of standards that consistently establish a particular quality level. The evaluation factors are also selected, defined, and weighted to match the same quality level. Each proposal is evaluated against the standards of the SOW and not against each other. This provides consistency, objectivity and comparability between proposals. [18:4]

## E. TECHNICAL EVALUATION PANEL (TEP)

### 1. Establishing a TEP

Normally, in an acquisition where source selection is based on an evaluation with primary emphasis on factors other than price, a technical evaluation panel (TEP) is established to perform the actual evaluation and to provide a recommendation to the contracting officer. The panel generally consists of at least three members and seldom more than five. Some major activities have local restrictions against the use of only one member on the TEP although not specifically forbidden by procurement regulations. A TEP chief is selected to chair the meetings and to be a central contact point. The vote of the TEP chief should be equal to the other panel members [11]. Ideally, the TEP should be identified at least by organization involved and position, if not by name, prior to submitting the procurement request (PR) to the contracting activity [2:7].

In selecting TEP members consideration should be given to their particular areas of expertise and to their availability to perform the evaluation. It is possible that some TEP members may evaluate proposals in all areas and others may evaluate only a single area related to their own expertise. TEP members are usually from the requiring activity but evaluators may be used from any Government activity. Nongovernment personnel should not be used as TEP voting members but may be used on an advisory/consultant basis if they are acting in an official capacity or under contract for that purpose. If

consultants are to be used, they can be listed in the RFP to surface any conflicts of interests prior to initial receipt of proposals [15]. Consultants should be allowed access only to those portions of the proposal that are necessary to enable them to give specific technical advise [16:3-5].

## 2. Standards of Conduct

TEP members for major weapons systems acquisition are required to sign a statement that they will make no unauthorized disclosure or release of any source selection information. A second signature is required on a statement that they have no personal conflicts of interest with any potential offeror. Sample statements are provided as Figures 1 and 2 [14:31].

The general rules of conduct are: [14:31]

- direct all inquiries pertaining to the source selection to the contracting officer.
- do not permit office personnel to divulge TEP member activity to casual callers.
- do not assume that a non-participating contractor can be told anything pertaining to the source selection activity.
- do not discuss proposals among TEP members at social events.
- do not accept any invitation from contractor personnel to participate in any social affair regardless of how remote it may be to the TEP activity.
- do not discuss TEP sensitive data even after the announcement of a winning contractor.



#### Disclosure of Source Selection Information Statement

I certify that I will make no unauthorized disclosure or release of any source selection information. This includes the contents of all proposals submitted in response to (contract number), and any evaluation thereof. I further certify that I will not discuss with any unauthorized person the panel's finding or decisions, the contractor's approaches, or any data generated during the selection process. I understand that unauthorized disclosure or release of any source selection information may subject me to disciplinary or adverse administrative action.

Figure 1

#### Conflict of Interest Statement

I certify that neither I nor my immediate family, to the best of my knowledge, possesses any financial interest whatsoever in any company, parent or subsidiary, which is proposing or quoting on or is any way involved in the acquisition now being considered by the source selection board of which I am a member. Should any company in which I or my immediate family have a financial interest submit quotes or proposals to my board, I will reveal immediately such interest to the chairperson of the source selection board.

Figure 2

The degree of technical sophistication as well as the dollar value and sensitivity of the acquisition are among those considerations that dictate the magnitude of the TEP briefing effort. NFAS activities have on occasion required TEP members to sign disclosure and conflict of interest statements but more often they send a cover letter addressing the subject along with the initial proposals [11]. Whatever the manner, information security can be improved by an early briefing of the TEP. Another important factor is holding to a firm schedule. As time drags on there is a greater chance of a leak [7].

### 3. Basic Duties

The basic duties of the TEP are: [5:2-8]

- review and finalize the SOW.
- recommend evaluation criteria.
- recommend sources for solicitation.
- evaluate technical proposals.
- participate in preproposal conferences.
- prepare technical documentation in support of contracting officer.
- participate in contract negotiations.
- participate in debriefing unsuccessful offerors.

When proposals are submitted to the TEP for evaluation, the members should be advised that the evaluation must be conducted in strict accordance with the evaluation factors set forth in the RFP. They should also be advised that the

evaluation documentation must contain a reasonably complete discussion of each proposal under each factor [20:13-1].

The members should be made aware of the Freedom of Information Act (FOIA) and that the evaluation documentation may eventually be made available to the offerors. In many ways the FOIA has been a benefit in obtaining better evaluation reports [11]. This subject is addressed in greater detail in Chapter VI.

The TEP evaluations are to be based on all available information including proposals, discussions, reference and other appropriate checks, and the personal knowledge of the individual members in the areas of their expertise [12:3-3]. The TEP should establish an internal procedure for resolving individual differences of opinion and negotiating a group result. Differences may also develop between the TEP and the contracting officer. The TEP should be aware that the decisions of the contracting officer are final and the TEP must act in accordance with the decision [5:2-10]. Finally, the TEP should keep in mind that the Government may be forced to bear the burden of a defective evaluation. This may mean anything from an expression of displeasure from GAO to a directive that the current contract be cancelled and resolicited [9]. There have been some cases where the TEP evaluations failed to give a fair and honest consideration to the offeror's proposal and the offeror was entitled to recover proposal preparation costs from the TEP activity [21].

### III. MULTI-ATTRIBUTE UTILITY MEASUREMENT (MAUM)

Procuring activities may exercise considerable discretion in determining the particular method of proposal evaluation to be utilized. The only requirements are that the method provide a rational basis for source selection and that the evaluation itself be conducted in good faith [13]. However, there are entire fields of study directed at identifying and improving evaluation techniques and procedures. Decision analysis is a discipline for systematic evaluation of alternative actions in order to make a choice among them [22:vii]. Some other related fields are systems analysis and policy analysis [23:4]. Extensive research and field testing has been conducted to identify those evaluation techniques and procedures that are most effective.

A sub-division of decision analysis that has been gaining popularity in the last five years is Multi-Attribute Utility Measurement (MAUM). MAUM is an explicit technique that is a decision making tool. The MAUM procedure for evaluating multiple attributes of various alternatives is essentially the same process as NFAS activities currently use in source selection. Multiple evaluation factors are established and weighted and each proposal is scored using these factors by a technical panel of experts. There are few guidelines on the proper use of evaluation factors being used by NFAS activities. The explicit nature of MAUM would bring a sense of direction and exactness to the source selection process [24].

In a very pure definition, MAUM is not a method of evaluation, but rather a widely applicable method for organizing and presenting evaluation information [25:1]. After the evaluation factors are clearly identified, ranked and weighted, the individual evaluator is still faced with the problem of how to evaluate the proposal for that particular factor.

#### A. PURPOSE

The purpose of this chapter is to describe a version of MAUM that is simple and straightforward so that any TEP that wishes to conduct a MAUM evaluation may do so without reference to any other source. There are some rather sophisticated versions of MAUM currently being used by major weapons systems activities that require trained analyst and computer support. It is assumed that the TEP members at most NFAS activities are not trained analysts even though they are recognized experts in a particular field. Therefore, it is further assumed that the TEP would reject any overly complex analytical procedure.

#### B. SIMPLE MULTI-ATTRIBUTE RATING TECHNIQUES (SMART)

The Simple Multi-Attribute Rating Technique (SMART) is a version of MAUM specifically developed for the non-professional analyst. The technique was developed primarily by Dr. Ward Edwards, currently the Director, Social Science Research Institute, University of Southern California. It has been used

primarily in the evaluation of social programs such as criminal justice programs and school busing plans. Because of the nature of social programs, the primary input to their evaluation is the judgment of experts in the field. In contrast, the physical characteristics of the hardware is a major portion of a weapons system evaluation. Superior properties can be determined by measurement and testing. Because of the nature of service contracting efforts, the primary input to their evaluation is also the judgment of experts. For this reason, this researcher believes that all the field testing of SMART on evaluation of social programs establishes its validity for use in the evaluation of service contractors.

The following description of SMART is a paraphrase of written material provided by Dr. Edwards as supplemented by a personal interview. The primary difference is that the nomenclature has been converted from analytical language to procurement language.

The basic assumptions of SMART are [25:1-3]

- requests for services normally have multiple goals which are not equally important.
- judgments are inevitably a part of any evaluation.
- judgments of magnitude are best when expressed numerically.
- evaluations are directly relevant to the source selection decision.

Because a source selection must be defensible, evaluators may be hesitant to use judgment to arrive at a recommendation. However, unless the judgment of the TEP is clearly without a reasonable basis, or there is an abuse of discretion, or a violation of procurement statutes, the judgment of the TEP will not be disturbed [26]. Nevertheless, if the TEP uses an intuitive method of scoring an evaluation factor when industry standards are available, they could expect strong criticism because it is expected they will use hard facts and data when available [27:11].

Sometimes expert evaluators are reluctant to express their judgments in numerical form. However, Dr. Edwards states, "...the evidence abundantly indicates that numerically expressed judgments are far more accurate and far more useful than human judgment expressed in the more familiar quantitative verbal forms." [28:181] A sound narrative is still required, but the numbers lend themselves to convenient manipulation, aggregation, and trade off evaluation.

Dr. Edwards suggests three steps to be used to increase the likelihood that the evaluation will be used in the decision [25:1-10].

- involve the contracting officer or source selection official in the evaluation process.
- make the evaluation directly relevant to the source selection decision.
- make the product of the evaluation readable and easy to use.

### C. ELEMENTS OF SMART SYSTEM

The SMART system is characterized by a ten step procedure. The basic technique does not change, only the identity and expertise of the typical evaluators.

1. Step One: Identify the person, persons, organization, or organizations whose values are to be maximized.

Both persons and organizations will usually be relevant generic "stakeholders." [28:189] A typical series of questions to ask are:

- Who are the end users of the service?
- Who are the potential contractors?
- Who is the contracting officer?
- What is the potential for SBA, Congressional or other high level involvement?

2. Step Two: What is the purpose of the evaluation?

This is more than simply source selection. The ultimate purpose is to provide a service in order to fill an identified requirement.

3. Step Three: Identify the entities to be evaluated.

A feature of the evaluation process for source selection is that the evaluation factors must be set forth in the RFP and, therefore, before receipt of proposals. Although not normally required by the SMART technique, it does improve the objectivity of the evaluation [24]. However, it does require substantial prior knowledge of potential contractors and their essential characteristics.



It is important to decide whether the evaluation will be based solely on the technical content of the proposals or be expanded to include the contractors themselves. The evaluation of a contractor requires the use of responsibility type factors such as "experience" and "facilities." It is improper to use only responsibility type factors. However, it is proper to use responsibility type factors in conjunction with evaluation factors bearing on technical approach when used to make relative assessments of the merits of individual proposals. A separate responsibility finding is made on the contractor in line for award after the proposal evaluation has been completed [10].

4. Step Four: Identify the relevant evaluation factors.

The motto of decision analysis is "divide and conquer." [25:31] This means that the evaluation problem should be divided into separate elements and then recombined by means of an appropriate formal aggregation rule. In addition, the judgmental tasks should be partitioned to fit the expertise of the evaluators.

This evaluation factor structuring task is probably the most important, difficult and creative aspect of SMART. The procedure recommended by Dr. Edwards is to develop an evaluation factor tree. A hierarchical structure of evaluation factors with more abstract and unmeasurable factors at the top and better defined and more measurable sub-factors at the bottom [28:191]. (See figure 3.) The advantages of the tree structure are: [25:2-8]

Step Four

Identify the relevant evaluation factors

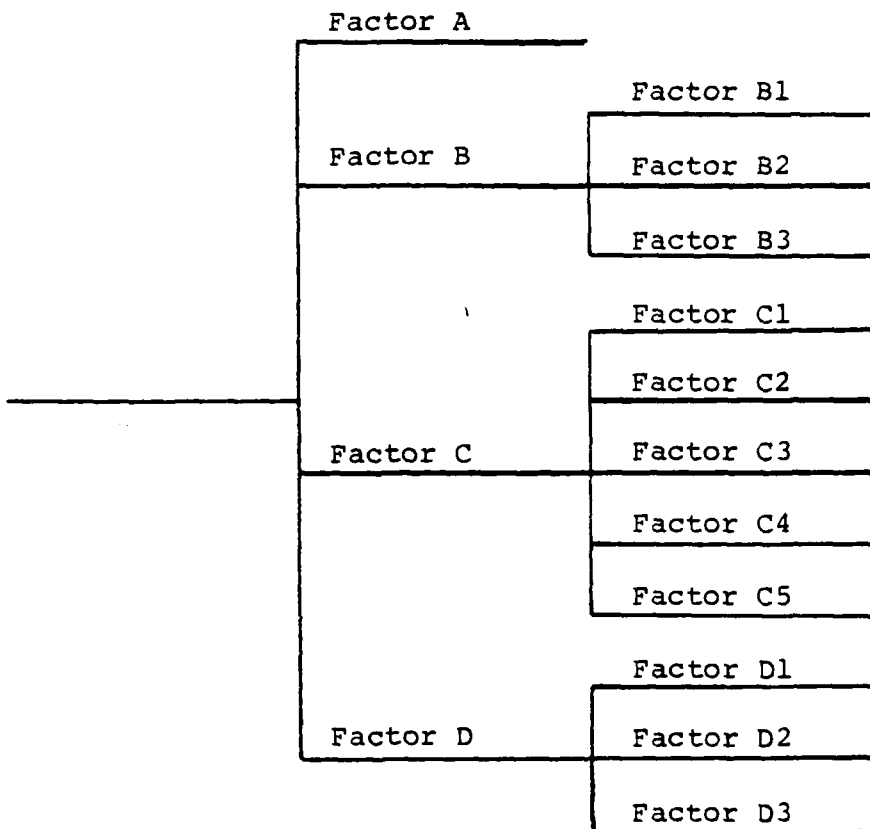


Figure 3

- it presents factors in a more orderly structure, thereby helping though about the problem.
- it can help reduce the number of judgments required.
- it permits subaggregation.

Experience shows that there is a tendency for individuals to add factors while seldom will anyone eliminate a factor. The result often is too many evaluation factors. Ideally, only four or five factors are enough. However, since many more factors than that must usually be considered, Dr. Edwards recommends that eight are enough and fifteen are definitely too many. The reasons why the number of evaluation factors should be kept small are: [28:19]

- a large number of factors dilutes the importance of an important factor relative to another.
- more work is required to gather necessary information.
- more difficult to maintain independence between factors.

Dr. Edwards recommends several methods for reducing the number of factors: [28:192]

- assemble the TEP face-to-face to improve communications.
- look for factors that are simply the relabeling of other factors.
- look for factors that have a high environmental correlation
- eliminate the factors that are not important enough to influence the decision.

An example of environmental correlation would be in the evaluation of senior academic personnel to provide training services. There would be a high correlation between the degree status and the number of published writings. One should either combine the factors and evaluate together or select one factor to use as a proxy for the other [24].

5. Step Five: Rank the factors in relative order of importance.

For evaluation factors arranged in a tree, factors beneath each node in the tree are ranked separately. This means the major factors would be ranked with each other and the sub-factors would be ranked separately under each major factor. (See figure 4.)

6. Step Six: Assign weights to each evaluation factor.

Weights are useful because all the factors in the evaluation tree are not of equal importance. Weights serve as devices that represent the relative importance of each factor to all others. They establish an exchange rate among evaluation factors. The SMART technique allows the use of several weighting procedures, but Dr. Edwards recommends the "ratio method." [24]

To assign weights using the ratio method, start with the least important major factor and assign a weight of 10. Then compare this factor with the next most important factor and assign a weight that depicts how much more important that factor is relative to the least important factor. For example,

Step Five

Rank the factors in relative order of importance

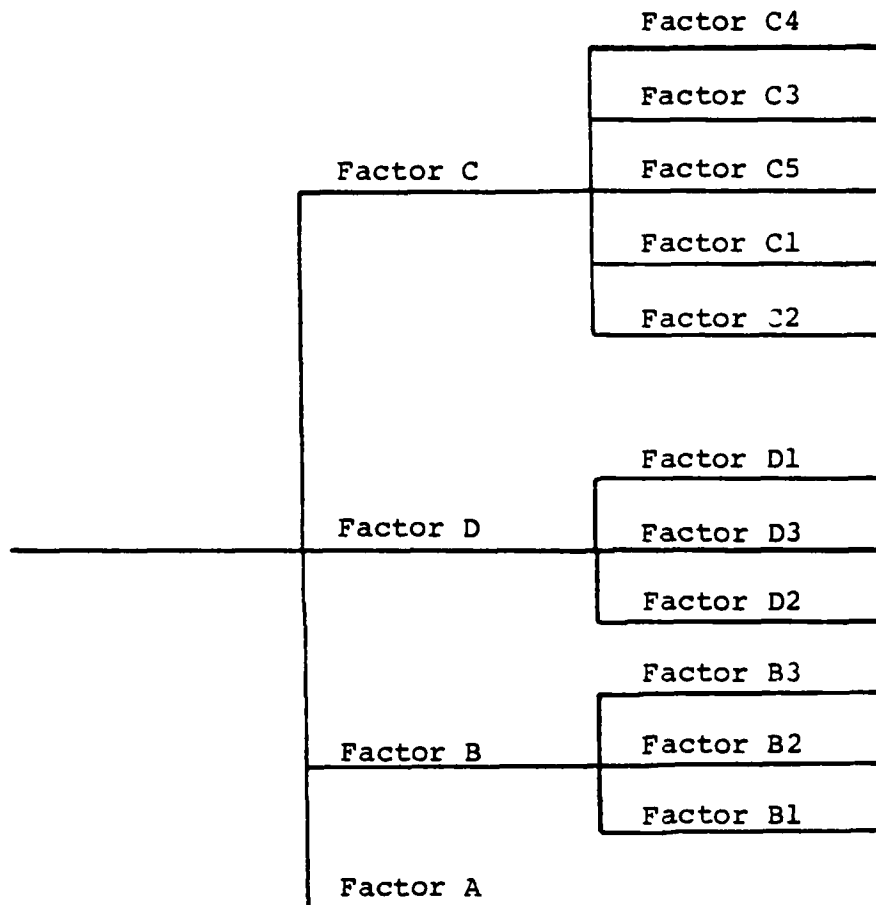


Figure 4

in figure 4, factor B is twice as important as factor A and therefore receives a weight of 20. In working up the list of major factors, the TEP must consider not only the least important factor, but all other factors that have already been assigned weights. Constant adjustments of weights are to be expected. After the major factors are completed, each individual group of sub-factors is assigned weights using exactly the same ratio method starting with a weight of 10. Ties are permitted but not encouraged because they complicate full disclosure in the RFP [25:4-6].

7. Step Seven: Normalize the weights and calculate the final weight assignments.

Normalization is a simple mathematical technique used to make all the factor weights add up to 100 and for each group of sub-factors to add up to the weight assigned the major factor. The weights assigned the major factors are summed. The weight assigned each major factor is divided by the sum of the major factors and multiplied by 100 to give the final weight. For example, in figure 5, the final weight for factor C is calculated dividing the original weight of factor C (50) by the sum of all original weights (115) and multiplying by 100 to get 43.478. Obviously, any mathematical technique that starts with judgmental inputs is not accurate to three decimal places. Therefore, each TEP should discuss this issue and come to a consensus in order to maintain comparability between the evaluations of each panel member. For this example,

# Step Six

Assign weights to each evaluation factor

			C4	60
			C3	45
		C	C5	40
			C1	20
			C2	10
			D1	30
		D	D3	20
			D2	10
			B3	35
		B	B2	25
			B1	10
		A		

Figure 5

the final weight of factor C is rounded to 43.5. Each group of sub-factors is normalized in exactly the same manner, except that instead of multiplying by 100, multiply by the major factor weight. (See figure 6.)

A side benefit of this step is that the folly of including too many evaluation factors becomes apparent. If a factor has a final weight less than or approaching 1.0, it may be trivial. One should consider combining this factor with another factor or deleting the factor altogether [29:11].

8. Step Eight: Scoring and rating the proposals.

A score or a rate is an assessment of how desirable a particular proposal is with respect to a particular factor. Prior to the receipt of proposals, a scoring or rating method should be established for all judgmental factors. This will aid each TEP member in scoring and increase the comparability between their scores. A common technique is to establish a scale that relates adjective statements with numerical values. This method is typically used in personnel evaluations. [30:12]

In developing a scoring or rating scale, several points should be considered: [25:5-5]

- evaluators are reluctant to approach the extremes, especially the lower extremes.
- the scale should serve to differentiate one proposal from another and therefore should be spread out.
- the scale should allow for the evaluation of proposals outside the expected range.



## Step Seven

### Normalize the weights and calculate the final assignment

		C4	$\frac{60}{175} \times 43.5 = 14.9$	
		C3	$\frac{45}{175} \times 43.5 = 11.2$	
		C5	$\frac{40}{175} \times 43.5 = 9.9$	
		C1	$\frac{20}{175} \times 43.5 = 5.0$	
		C2	$\frac{10}{175} \times 43.5 = 2.5$	Sum = 43.5
		<hr/>		
		D1	$\frac{30}{60} \times 30.4 = 15.2$	
		D3	$\frac{20}{60} \times 30.4 = 10.2$	
		D2	$\frac{10}{60} \times 30.4 = 5.0$	Sum = 30.4
		<hr/>		
		B3	$\frac{35}{70} \times 17.4 = 8.7$	
		B2	$\frac{25}{70} \times 17.4 = 6.2$	
		B1	$\frac{10}{70} \times 17.4 = 2.5$	Sum = 17.4
		<hr/>		
A	$\frac{10}{115} \times 100 = 8.7$			
B	$\frac{20}{115} \times 100 = 17.4$			
D	$\frac{35}{115} \times 100 = 30.4$			
C	$\frac{50}{115} \times 100 = 43.5$			

Factor sum = 100

Figure 6

There is a close relationship between the scoring or rating scale and the weights assigned in Step Six. Separate scales can be developed for each evaluation factor based on the expected range of proposals. Within the expected range, an acceptable zone is identified bounded by the minimum acceptable and maximum acceptable. For ease of computations and with little loss of accuracy the scale within the acceptable zone is normally assumed to be linear. The weights assigned are good only for proposals in this acceptable zone [25:5-12]. In the evaluation of social programs the weights may be adjusted if the alternatives are different than original expectations. However, because DAR does not allow major changes in weights after the receipt of proposals, mechanisms should be designed into the scoring or rating scale in order to consider proposals outside the original acceptable zone.

From a practical standpoint, a universal scoring or rating system can be used instead of developing a scale for each factor. Alterations are then limited to adjusting the weights. An example of a universal scoring or rating scale is provided below. Notice that the evaluator does not have to know the weight assigned a particular factor in order to score that factor.

1.0 Exceeds specified performance or capability and excess is useful (not gold plating).

.9 Outstanding - a definite strength that meets all the requirements of the RFP with a high probability of success.

.8 Above average - a minor asset but with room for improvement.

.7 Average - neither a strength or weakness with significant room for improvement.

.6 Below average - a minor deficiency but acceptable without correction.

0.0 Unsatisfactory - fails to meet the standards of the RFP and is not correctable without a major rewrite of the proposal.

This universal scoring or rating scale has a mechanism for evaluating excess above the acceptable range and a mechanism for making unacceptable proposals stand out numerically. It allows excess to be considered which encourages innovation and alternative proposals. Excess is set apart and allowed to enter into the computations only if the excess is useful. The wide spread between Weak and Unsatisfactory is important because it forces the evaluators to address the critical question whether the deficiency is capable of being corrected. If a major factor is unacceptable, the entire proposal is unacceptable. Numerically, a zero score on a major factor would clearly set a proposal apart from other proposals that had scored at least fifty percent in all major factors.

The mathematics of using this scale are illustrated by figure 7.

# Step Eight

## Scoring and rating the proposals

			C4	$14.9 \times .9 = 13.4$
			C3	$11.2 \times .6 = 6.8$
		C	C5	$9.9 \times .8 = 7.9$
			C1	$5.0 \times .75 = 3.8$
			C2	$2.5 \times .7 = 1.8$
			D1	$15.2 \times .8 = 12.1$
Proposal X		D	D3	$10.2 \times .95 = 9.7$
			D2	$5.0 \times 1.0 = 5.0$
			B3	$8.7 \times .9 = 7.8$
		B	B2	$6.2 \times .8 = 5.0$
			B1	$2.5 \times .7 = 1.8$
		A		$8.7 \times .8 = 7.0$
				Max possible = 100

Figure 7

9. Step Nine: Aggregate.

The aggregation rule is very simple and is illustrated by figure 8. The larger the final numerical score, the better the proposal. Normally, the proposal with the largest numerical value would be considered the best proposal [25:6-2].

10. Step Ten: Decide.

It is important to realize that SMART is only a decision making tool and the results are not the decision [33]. The results must be presented to the contracting officer or the source selection official in a manner that objectively presents and supports the recommendation of the TEP. Important trade-offs and options should be identified. In complex, high dollar value procurements, a sensitivity analysis may require computational support. Dr. Edwards has developed programs for the TI-59 and HP-41C hand held programmable calculators which are available upon request.

Step Nine

Aggregate

		C4	13.4
		C3	6.8
	C	C5	7.9
		C1	3.8
		C2	1.8
		D1	12.1
Proposal X	D	D3	9.7
82.1		D2	5.0
		B3	7.8
	B	B2	5.0
		B1	1.8
	A		7.0

Figure 8

#### IV. GOVERNMENT CONSTRAINTS

Although procuring activities have broad latitude in the source selection process, there are a considerable number of constraints under which they must operate. Surprisingly, the major body of these constraints does not come from the Defense Acquisition Regulations, but from the decisions of the Comptroller General of the United States. These decisions are a result of protests filed by contractors or the result of formal requests by administrative agencies for a GAO decision. Once the decision is made and issued, it is binding on the procuring activity. Decisions of general interest are published monthly in pamphlets and annually in volumes. [31:13]

##### A. SUMMARY OF THE RULES

The following is a summary of the rules as extracted from the GAO decisions and other literature by the researcher concerning the source selection process. It is by no means complete and any specific question should be referred to legal counsel.

1. Procuring activities have broad latitude in determining the particular method of proposal evaluation [13].

- The method must provide a rational basis for source selection.
- The evaluation must be conducted in good faith.
- Numerical scoring is not required.

- GAO will not disturb unless shown to be arbitrary or contrary to statutes or regulations.

2. All offerors in a negotiated procurement must be informed of the major evaluation factors and their relative importance.

- The weights of the evaluation factors shall not be disclosed [32].
- If one factor is assigned a predominant value, its greater relative importance shall be indicated by appropriate language [33].
- If no indication of the relative importance of factors or sub-factors is given, offerors may assume equal importance [34].
- Any minimum standards applicable to a factor must be revealed [35:22].
- Various aspects of factors need not be explicitly identified provided such aspects are logically related to the stated factor [36].
- Relative importance of "definitive" or descriptive sub-factors need not be revealed.
- Relative importance of sub-factors that are essential characteristics or measures of performance shall be revealed [37].

3. GAO will not become involved in appraising the qualifications of evaluators [38].

- In allocations of bias, the protester has the burden of proof [39].
- The evaluation panel may be one individual or a team [40:8].
- All evaluators are not required to evaluate revised proposals [41].

4. Evaluation factors may be used in the negotiation of fixed price contracts, particularly if the desired product is creativity and innovation rather than manpower [42].



- Proposal evaluation should not be considered responsibility findings [10].

5. Evaluation of detailed resumes and firm commitment of key personnel do not create a prohibited personal services contract [42].

- If offerors are contractually committed to provide listed key personnel, letters of commitment become excess [43].

- Requirement that key personnel be presently employed with offeror is unduly restrictive [44].

6. It is fundamental in the award of a cost type contract that proposed cost be analyzed in terms of cost realism [45].

- Merely comparing the estimated costs proposed by offerors is inadequate [46].

- An independent cost projection should be used in the evaluation of the reasonableness of proposed cost [17].

- It is permissible to reveal the government estimate and to use it in negotiations [47].

- GAO has cautioned against undue reliance on the government cost estimate [47].

- Phase-in cost factors may be used only if set forth in the RFP [48].

- If regulations require the use of certain factors, they must be used even if not disclosed in RFP. Examples are transportation costs and freight costs. [49].

- Intent to use Government property is a required factor if there are indications that one or some, but not all offerors will require the property [50].

- Evaluated cost rather than proposed cost provides a more sound basis for determining the most advantageous proposal [51].

7. It is not the function of GAO to make determinations as to the acceptability or relative merits of technical proposals [26].

- The TEP may consider its own experience with the offeror in evaluating the proposals [52].
- The Government may use its own reasonable estimate of manhours to measure the offeror's understanding of requirements [53].
- In an unrestricted procurement, it is improper to evaluate small business proposals differently [54].
- Evaluation of prior experience/past performance is not improper or discriminatory with respect to small business [10].
- The contracting activity must bear the burden of any difficulties resulting from a defective evaluation [26].
- If an evaluation is found to be arbitrary and capricious, the low offeror may be entitled to proposal preparation cost [21].

8. Proposals that do not provide sufficient detail to permit technical evaluation without complete rewrite may be rejected as technically unacceptable [55].

9. Award may be based on initial proposals: [40:4]

- if urgent delivery requirements will not permit discussions.
- if the existence of adequate competition or accurate cost experience can be clearly demonstrated.
- if acceptance of the most favorable initial proposal would result in a fair and reasonable price to the Government.

10. Unless the award is to be made on a proposal as initially submitted, written or oral discussions must be held with all responsible offerors in the competitive range [40:5].

- The use of pre-determined cut-off scores to establish the competitive range is not in accordance with sound procurement practice [56].
- Proposals may be found outside the competitive range on the basis of cost or technical factors without consideration of the other, however, a technically acceptable proposal may not be found outside the competitive range without consideration of cost [40:5].
- Once a proposal is included in the competitive range, it cannot be excluded without an opportunity to submit a revised proposal [40:5].
- An unsuccessful offeror is to be advised that he is no longer in contention unless award is to be made in a few days [40:9].

11. The Government must usually furnish information to offerors as to the areas in which their proposals are deficient.

- It is not required to discuss inadequate areas of a proposal to the extent technical trans- fusion or technical levelling would take place [57].
- The offeror has a right to know that discussions are being conducted, Best and Final (B&F) offers are required, and the deadline for submission [40:7].
- A second B&F is permitted where justifiable [40:7].
- Technical scores may be reduced after second evaluation [36].

12. Where selection officials have determined proposals to be technically equal, cost can become the determining factor in award [58].

- A determination of technical equality must be made. Simply awarding to the lowest qualified offeror fails to follow the announced evaluation scheme. [59]

- A factual explanation why proposals are essentially equal is required. A bare conclusionary statement is not sufficient. [60]
- Whether a given point spread indicates a significant superiority of one proposal over another depends on the facts and circumstances of each procurement [61].

13. The contracting officer or source selection official is not bound by the recommendations of the TEP provided such selection is reasonable and consistent with the evaluation criteria [62].

14. Protests which are based upon alleged improprieties in the evaluation scheme and which are apparent prior to the closing date for receipt of initial proposals must be filed prior to the closing date for receipt of initial proposals. Protests alleging improprieties in the evaluation of proposals must be filed not later than ten days after the basis for protest becomes known or should have become known, whichever is earlier. [35:22]

#### B. PROTECTIVE FUNCTION OF SBA

As noted in Chapter II, the SBA has a role in the determination of responsibility with respect to small business offerors. The SBA has statutory authority to certify the competency of any small business concern as to all elements of responsibility, including, but not limited to, capability, competency, capacity, credit, integrity, perseverance, and tenacity. The Defense Acquisition Regulation (DAR) 1-705.4 states that the contracting officer shall accept as conclusive

SBA certificates of competency unless the contracting officer has substantial doubt as to the small business ability to perform. In this case the contracting officer must follow a review and appeal procedure set forth in DAR 1-705.4(f).

A few contracting officers have attempted to take advantage of the fact that the use of evaluation factors to evaluate technical proposals, when required by the nature of the requirement, is not a responsibility determination. Evaluation factors have been used on requirements where highest expertise or best scientific approach was not required. This is indicated when the evaluation scheme contains only responsibility type factors. However, GAO has condemned the practice of rejecting small business proposals under the guise of relative assessment in order to avoid compliance with statutory requirements to submit such responsibility determinations to SBA.

[63;2]

## V. EVALUATION OF SERVICE CONTRACTORS

### A. PURPOSE

The heart of the evaluation and selection process is the evaluation factors and the weights assigned. The evaluation factors should consist of those elements which the Technical Evaluation Panel (TEP) must examine in each proposal in order to determine an offeror's: [64:11]

- understanding of the service to be provided.
- technical, business, and management approach.
- potential for completing the job as specified in RFP.
- probable cost based upon the offeror's approach.
- relative qualifications and experience including the key personnel proposed.
- relative competitive status.
- commitment and assumption of risk.

The establishment of evaluation factors and their weights requires the exercise of judgment on a case-by-case basis [12:2-2]. However, it is the purpose of this chapter to provide some general guidelines on the selection of evaluation factors and then some more specific guidance for service contracts in particular.

### B. GENERAL GUIDELINES

In selecting evaluation factors for any evaluation, the evaluation factors should meet the following criteria. The factors should be: [65:50]

- discriminating, result in different scores for competing proposals of various relative merit.
- operational, can be meaningfully used in the analysis.
- decomposable, can be simplified by breaking down into unidimensional parts.
- relevant to source selection, do not collect "baseball statistics" or data on all aspects of the offeror.

After the initial list of factors is developed, it should be tested as a set against the following criteria: [66:123]

- independent or redundant, double counting of factors should be avoided.
- exhaustive or incomplete, covers all the important aspects of the proposal.
- compensating or unbalanced, high scores in one factor offsets low scores in another.

#### C. SPECIFIC GUIDELINES

As indicated in Chapter IV, there are no restrictions on the kinds of evaluation factors which may be used as long as they are disclosed in the RFP and relate to the purpose of the procurement. However, a review of major weapons systems handbooks and guides, and interviews with NFAS personnel has shown specific areas of evaluation common to service contracting. The specific factors generally fall into the following major categories: technical; key personnel; management and business; experience and past performance; cost; and others.

##### 1. Technical

Often contractors will be required to submit technical proposals that outline their scientific or engineering approach to a problem statement set forth in the RFP. The SOW is very

broad and new, innovative ideas are encouraged. The technical factor may become dominant in the evaluation scheme. An example of how the major technical factor may be decomposed is as follows: [5:3-51]

- soundness of approach.
- understanding of the requirement.
- compliance with requirements in RFP.
- unique ideas.

## 2. Key Personnel

The SOW may also be very detailed and specific with a fixed approach. An example would be training services with a fixed subject matter and an established schedule of instruction periods. The source selection then becomes highly dependent on the education, experience, and quality of the key personnel proposed by each offeror. When key personnel is used as an evaluation factor, the RFP should identify those functions or positions for which key personnel will be evaluated and require the submission of resumes. There are many problems related to the use of key personnel as a factor and the submission of resumes. [8]

- The resumes submitted are too general and do not address the specific skills or experience required for the immediate procuremt.
- The key personnel proposed are not currently employed by the offeror and there may be uncertainty as to their availability.
- The key personnel proposed are highly experienced and qualified but only work in administration and management of the firm and rarely provide direct contract effort [67:21].



- Certain individuals appear on multiple proposals.
- Key personnel may depart shortly after award of the contract or be used on other contracts.
- There may be a mismatch between the qualifications of key personnel and the wages reported in the cost proposal.

As stated in Chapter IV, the Government cannot require that key personnel be currently employed by the offeror because it unduly restricts competition[44]. Many NFAS activities require the offerors to submit letters of commitment from key personnel with their proposal. Several activities have developed special contract clauses that require that key personnel must be replaced by substantially equal personnel. Failure to do so then becomes a grounds for Termination for Default [8]. The special contract clause for key personnel used by NSC Oakland is provided as figure 9.

Many of the above problems common in the use of resumes can be traced to inadequate solicitations. The RFP must clearly identify the key personnel positions and provide explicit direction on the content and form of the resumes. If appropriate, the RFP should require the contractor to provide personal references and contact points in order for the TEP to validate an individual's performance on a past work effort. Often in the wording of resumes, the contractor may overstate or conceal the relatively minor role of an individual. Also, the contractor may fail to state that the customer was dissatisfied with the performance of the individual [67:21].

#### KEY PERSONNEL REQUIREMENTS CLAUSE

- (a) Certain skilled experienced professional and/or technical personnel are essential for successful contractor accomplishment of the work to be performed under this contract. These are defined as "Key Personnel" and are those persons whose resumes were submitted for evaluation of the proposal.

The contractor agrees that such personnel shall not be removed from the contract work or replaced without compliance with paragraphs (b) and (c) hereof.

- (b) If one or more of the key personnel for whatever reason becomes, or is expected to become, unavailable for work under this contract for a continuous period exceeding 30 work days, or is expected to devote substantially less effort to the work than indicated in the proposal or initially anticipated, the contractor shall immediately notify the Contracting Officer and shall, subject to the concurrence of the Contracting Officer or his authorized representative, promptly replace such personnel with personnel of at least substantially equal ability and qualifications.
- (c) All requests for approval of substitutions hereunder must be in writing and provide a detailed explanation of the circumstances necessitating the proposed substitutions. They must contain a complete resume for the proposed substitute, and any other information requested by the Contracting Officer or needed by him to approve or disapprove the proposed substitution. The Contracting Officer or his authorized representative will evaluate such requests and promptly notify the contractor of his approval or disapproval thereof in writing.
- (d) If the Contracting Officer determines that suitable and timely replacement of key personnel who have been reassigned, terminated or have otherwise become unavailable for the contract work is not reasonably forthcoming or that the resultant reduction of productive effort would be so substantial as to impair the successful completion of the contract or the service order, the contract may be terminated by the Contracting Officer for default or for the convenience of the Government, as appropriate, or, at the discretion of the Contracting Officer if he finds the contractor at fault for the condition, the contract price or fixed fee may be equitably adjusted downward to compensate the Government for any resultant delay, loss or damage.
- USE: In RFP's and contracts where having skilled and experienced technical or professional personnel constitutes an important factor in the evaluation of technical proposals for award.

Figure 9

If the TEP is not satisfied with the resume or an individual, the oral or written negotiations required to be held with those offerors in the competitive range should be used to gather additional data [12:2-5]. If the TEP simply is not satisfied with the individual, this should be pointed out as a deficiency in order to allow the contractor the opportunity to propose a more satisfactory individual.

### 3. Management and Business

An example of a further breakdown of the major management and business factor is as follows:

- management and business.
  - management plan.
    - planning.
    - organizing.
    - controlling.
  - corporate resources.
    - necessary support equipment.
    - manpower skill mixes and number.
    - necessary support facilities.

Management science has clearly identified planning, organizing, and controlling as the three basic functions of management [68:92]. The management plan describes the offeror's approach for efficiently managing the work and effectively integrating these functions. It normally includes: [12:2-4]

- the proposed organization including internal operations and lines of authority.

- external relationships and interfaces with the Government.
- major subcontractors.
- necessary performance schedules.

The management plan can become an important discriminator in contracting for services for the operation of Government owned facilities and systems. Often the majority of the operational personnel remain while the management groups change from contract to contract. Therefore, the primary function of the contractor is to provide management skills. [11]

A contractor may also locate, staff and equip a facility physically close to a major Government activity in order to provide support services. Examples are R&D services, engineering and technical services, and ADPE services. The discriminating evaluation factors could then be related to superior computer capability, superior evaluation and test equipment, or superior facility features [12:2-6]. In this evaluation area, great care should be taken to separate qualification factors from evaluation factors. For example, a procurement may require that a contractor provide a service that necessitates the use of a computer compatible with Government computers. The computer compatibility requirement should be set out as a qualification factor. Evaluation factors for other computer compatibilities may or may not be used in the evaluation plan. If the qualification factors are well understood, contractors lacking the required personnel, equipment,

or facilities are not likely to incur the expense of proposal preparation [16:3-15].

It may be necessary to evaluate personnel as a corporate resource in place of or in addition to key personnel. An example would be senior engineers, engineers, draftsmen, and technicians required to provide engineering support services. A proper skill mix would provide adequate services without paying for over qualified personnel. The proper numbers of personnel would relate to the schedule being offered.

In the overall area of corporate resources, if an offeror does not possess adequate resources himself, he may be able to demonstrate the ability to acquire them through sub-contracts or otherwise [12:2-6].

#### 4. Experience and Past Performance

Past performance and experience are often used interchangeably but there is a difference in their meaning. Past performance is how well an offeror did on earlier work and can be a very significant indicator of how well he can be expected to perform on the proposed contract. Many organizations exhibit characteristics that persist over time. Examples are resiliency in the face of trouble, resourcefulness, management determination, skill in developing key personnel, etc.

Experience is the accomplishment of work by an offeror which is comparable or related to the work or effort required. Experience includes technical, cost, schedule, and management elements.

This evaluation factor should be limited to the overall corporate or offeror experience and past performance and not the past performance and experience of individuals. Individuals should be evaluated under key personnel. Information and data should be collected in addition to the proposal submitted by the offeror. Admittedly, the assessments to be made regarding experience and particularly past performance may be very difficult. Often the data will not be clear because of the difficulty in measuring recorded performance. In the event a substantially unfavorable response is received from another Government activity, the offeror should be given an opportunity during discussions to submit written comments regarding the unfavorable response. [12:2-8]

It may be prudent to include contractor potential with experience and past performance. New corporations dissolve and reform at a very rapid pace and it is not uncommon to be faced with the evaluation of a highly qualified contractor with no corporate history. Including potential provides the TEP with considerable flexibility. [8]

#### 5. Cost/Price

Cost or price is a required factor that must be included in the evaluation plan and relative importance revealed in the RFP. However, there is a disagreement as to whether cost/price should be scored in the same manner as other factors or whether cost/price should be evaluated in a narrative manner.

From a theoretical view, there is no difference between cost/price and any other factor in the evaluation plan.

It must be converted to the same utility scale in order to evaluate the trade-offs between factors [24]. Most NFAS activities score cost/price using a variety of scoring methods [8].

The GAO prefers that cost/price not be scored. They prefer that after a complete technical evaluation, the contracting officer or source selection official should prepare a narrative justification for the expenditure of funds over and above that proposed by the lowest qualified offeror in the competitive range. The rationale behind this position is that all factors other than cost/price are judgmental and therefore subjective. On the other hand, cost/price is a totally objective value and scoring distorts an already clear value. Most major weapons systems activities and NASA do not score cost. Because this issue is not addressed in statute, GAO accepts both methods. [69]

By whatever method cost/price is to be evaluated, a clear determination must be made as to what elements are to be included in the cost/price evaluation. Certain elements are required by regulations and must be considered in the evaluation even if they are not listed in the RFP. Examples are freight costs, transportation cost and Government Furnished Material (GFM). [49]

Options may be included in a service contract if there is an anticipated need beyond the initial contract period. This is in recognition of the Government's need for continuity of operations and to preclude cost associated with disrupted

support. Normally evaluations will be made exclusive of the option period. DAR 7-2003.11 provide special clauses for the evaluation of options and to discourage the submission of unbalanced proposals. An unbalanced proposal is one which is based on prices significantly less than cost for one period and prices significantly more than cost for another period. An unbalanced proposal may be rejected as non-responsive.

The option periods may be considered in fixed price type contracts if realistic competition is impracticable after the initial contract is awarded. This may be a result of substantial startup or phase-in costs or superior technical ability resulting from performance of the initial contract. Options may also be considered if there is a known requirement beyond the initial period and funding is currently unavailable. A reasonable certainty must exist that funds will be available to exercise the option. [70:1-1500]

Start-up or phase-in cost to the Government may be assigned to all proposals other than the incumbent contractor's proposal if specifically set forth in the RFP [48]. This naturally favors the incumbent and the procurement activity should expect to defend the amount, relevance and need of the costs assigned.

#### D. TESTING THE EVALUATION FACTORS

The evaluation factors may be tested for appropriateness by using different perspectives. From the potential contractor's perspective, the evaluation factors must make sense in



terms of the SOW requirements. From the TEP perspective, there should be a match between the evaluation factors and the skills and expertise of the TEP. The TEP must be able to develop documentation to justify the differences between acceptable offerors (lowest acceptable to highest acceptable). From the contracting officer's perspective the evaluation factors must not violate the rules summarized in Chapter IV. The evaluation factors must also be viewed from the perspective of future unsuccessful offerors. Although not violating any particular regulation or rule, the evaluation factors may unnecessarily invite protest.

#### E. THE FINAL EVALUATION PLAN

The RFP is only required to reveal the major evaluation factors and their relative importance. However, a final and complete evaluation plan should be developed early to avoid accusations that the evaluation plan favors certain offers. This may be prior to the release of the RFP, but certainly prior to the opening of any proposals. The evaluation plan should contain the weights, scoring/rating system and the basis for recommendation for award. Some complex normalization procedures have been used in an attempt to increase accuracy. For example, the measure of standard deviations from the average technical score as a factor to apply to raw scores. Any reasonable system is acceptable as long as it does not give unreasonable results. However, a system such as MAUM is supported by sound decision theory and extensive field research.

The issue of scoring cost is very sensitive and should be settled by making it a part of the evaluation plan. In the NFAS activities interviewed, the cost proposal is removed from the offeror's proposal prior to the initial technical evaluation by the TEP. The cost proposal is evaluated by the contracting personnel and the cost proposal is later provided to the TEP to check compatibility and reasonableness with the technical proposal. The cost proposal is scored by the contracting personnel often working closely with the TEP [81]. Local activities may develop special methods for assigning points to cost. Two such methods are the Twice-Low Method and the Greatest Value Method.

Twice-Low Method: NSC, Oakland has developed the Twice-Low Method to assign points for cost factors. The method is best explained by an example. If a maximum of 20 points was possible, the lowest acceptable offer would receive the full 20 points. The cost proposal of the lowest offer is then doubled and any offeror with a cost proposal greater than that amount would receive a score of zero. Any cost proposal within this range is scored on a straight linear scale. Therefore, a cost proposal halfway in between would receive a score of 10. [71]

Greatest Value Method: NRCO, Long Beach has developed the Greatest Value Method. In this method the cost proposal of the lowest offeror is divided by the cost proposal of the offeror being evaluated and then multiplied by the maximum

points possible. This also results in the lowest offeror receiving the maximum score possible. Therefore, if low acceptable offeror A proposed \$150,000 and next offeror B proposed \$200,000, of a possible 30 points, offeror A would receive 30 and offeror B would receive 22.5.

Both activities recognize that these methods are only tools and that each point assignment must be supported by written narrative judgment. Variations from using these mathematical formulas are allowed but must also be properly supported in writing.

The TEP and contracting personnel should clearly establish the basis of award recommendation. Normally, the offeror with the highest combined technical and cost score is recommended for award. However, award may be on a different basis. For example, award may also be made to the acceptable offeror in the competitive range with the lowest cost/price proposal. The basis for such an award must be set forth in the RFP. [59]

#### F. PROPOSAL PREPARATION GUIDANCE

After careful preparation of the SOW and SSP, the only major component remaining prior to release of the RFP is the Proposal Preparation Guidance (PPG). Again, it is important that the PPG be consistent with the SOW and evaluation factors in the RFP. Explicit instructions in format as well as implicit guidance contained in the organization and layout of

the RFP indicate to the offeror what the Government would like to see in the proposal.

Proposals are expensive and time consuming for the offeror to prepare and for the Government to evaluate. While proposals are expected to be comprehensive, excess volume, detail and brochuremanship do not serve either party. Misunderstandings and needless expenses are avoided if the RFP clearly establishes what is important and how to prepare proposals. To control size, the Government must exercise restraint in the listing of requirements and in the detail demanded. The estimated value of the contract should be used to strike a balance between what the Government must have and what would be nice to have.

The RFP should direct the offeror how to organize and arrange the proposals. This will not only facilitate the evaluation tasks of the TEP but will also facilitate proposal preparation. Great care should be taken in drafting these instructions in order that desirable innovations are not precluded [16:3-16]. The solicitation should include only necessary formats and concepts rather than an elaborate instruction for preparing proposals. The offerors should be directed to submit a sufficient number of copies of their proposal in order that each TEP member shall have his own copy.

The RFP should have a specific list all in one place of the data needed in the proposal. The list should be comprehensive and not depend on the offeror to fill in the blanks.

The instructions should motivate the contractor to submit a "First and Final" proposal and not to depend on negotiations to correct any deficiencies [7].

#### G. PREPROPOSAL CONFERENCE

Since preproposal conferences are expensive and time consuming to host and attendees, they should be used sparingly. A preproposal conference may be necessary in order to provide information that cannot be provided in the RFP or to clarify nebulous points. Examples are tours of Government facilities to be operated or formal presentations to further explain complex requirements. [5:4-20]

When the decision has been made to hold a preproposal conference, the procurement personnel make the necessary arrangements. Adequate notice shall be given to prospective offerors in order that they may submit questions and make arrangements to attend. The exact nature and scope of the conference should be explicitly stated.

The conference itself should be conducted by the contracting officer or a contract specialist. The TEP will assist and should be briefed on what can and cannot be discussed. Care should be taken to place emphasis consistent with the evaluation factors and SOW. All offerors should be provided identical information and advised that unless the RFP is amended in writing, it remains unchanged. A complete record shall be made of the preproposal conference and made a part of the contract file.

## VI. CONDUCTING THE EVALUATION

### A. PURPOSE

The purpose of this chapter is to list and describe the essential steps of the evaluation process. It is at this point that the extra time and effort invested in planning pays off. The primary function of the evaluation process is to provide a sound recommendation to the contracting officer in order that he may make an informed and objective source selection. This may consist of a single evaluation, but more often additional data gathering, negotiations, revised proposals and a second evaluation are required. This makes the process a combination of factfinding, reporting and application of professional judgment. [16:3-24]

### B. TEP FAMILIARIZATION

Just prior to the receipt of proposals from the contracting officer each Technical Evaluation Panel (TEP) member should review the Request for Proposal (RFP) to clearly establish how the Statement of Work (SOW) was presented and exactly how the evaluation criteria relate to this requirement. Several months may have passed and solicitation amendments may have been issued. Each evaluator must understand that the evaluation is to be accomplished in accordance with the RFP as written. What each evaluator thinks it should say cannot be allowed to enter the evaluation process.

A meeting of the TEP should be held to review and update the SSP. The TEP chief should chair the meeting. The primary purpose of the meeting is to cover all the administrative details of conducting the evaluation and to establish a schedule for evaluation completion [5:4-22]. Ideally, TEP members should be divested of all other duties and provided a separate working area to conduct the evaluations [16:2-7]. However, most NFAS activity customers are unable to do this and each TEP member must balance TEP duties with regular office duties. These problems must be confronted and solutions negotiated because the longer the evaluation drags out the greater the chance that either the cost proposals will expire and therefore need revision or the confidentiality of a proposal will be violated [11].

#### C. RECEIPT AND BREAKOUT OF PROPOSALS

DAR does not have a detailed procedure for the receipt, storage, and opening of proposals received in a negotiated procurement. However, the NFAS activities interviewed have well-developed procedures. All proposals, revised proposals, letters, telegrams and other correspondence are received by the contracting office. The original documents are made a permanent part of the contract file and only copies are distributed to the TEP. The cost proposals are usually separated from the technical proposal and provided to the TEP only after the initial technical evaluation is completed. A few activities have gone so far as to mask the identity of each offeror

in order to increase objectivity. The proposals are forwarded to the technical activity by U. S. mail with a cover letter that includes the appropriate cautions [11].

Technical activities have a less structured proposal control procedure. Classified proposals are controlled by the same security procedure as all classified documents. Due to the collateral nature of the TEP position, unclassified evaluations are often conducted at home during the evening or on weekends. Security and efficiency can be improved if each evaluator has a complete set of proposals. Each evaluator can then be individually accountable for a particular set of proposals. If for some reason proposals must be routed, delivery is by hand and not by guardmail. [11]

#### D. INITIAL EVALUATION

##### 1. Qualification Factors

The initial evaluation start with a review of each proposal using the qualification factors. This is a very mechanical process with a strict set of rules. The objective facts make a contractor either qualified or not qualified and professional judgment is seldom involved. Proposals that do not meet the qualification factors must be removed from competition or the procurement activity is open to protest from competitors.

##### 2. Grossly Deficient Proposals

During this initial review, any proposal that is so grossly deficient that it does not provide a reasonable basis on which



to conduct an initial evaluation without a total rewrite may be rejected as technically unacceptable [55]. Surprisingly, incumbent offerors may assume that the Government is familiar with their capabilities and decide not to incur the expense of a detailed proposal. Evaluation panels have rejected proposals from incumbents as grossly deficient and eliminated them from further consideration. Grossly deficient proposals are from contractors that do not have a basic understanding of Government contracting in general or of the anticipated work effort in particular. It is not the function of the TEP to provide basic lessons in the proper preparation of proposals [15]. A note of caution must be taken to ensure that the problem is with the offeror and not the result of a grossly deficient RFP [9].

#### E. IN-DEPTH EVALUATION

##### 1. Considerations During Evaluation

There is a lot of gamesmanship and brochuremanship used in the preparation of proposals by offerors. Some points to consider when performing a technical evaluation are:

[6:IV-7]

- avoid "reading into" or "reading out of" thereby overly interpreting what is written.
- avoid the influence of first impressions.
- look for ambiguities and inconsistencies.
- recognize the use of "catch phrases" and "buzz words."

- recognize the difference between technical substance and glossy presentation format.
- recognize the existence of flattery by an offeror.

Some of the games that offerors may play are:

[12:127]

- on a cost type contract an offeror may overstate his future business base in order to substantiate a relatively low overhead rate.
- on a cost type contract the offeror may optimistically underestimate the direct labor hours for a function such as engineering design in order to propose the lowest estimate cost.
- an offeror may hold a lower Best and Final figure for use at the last moment in an effort to show a competitive attitude or in hopes of obtaining last minute knowledge of what the competition is doing.
- an offeror may hire a competitor's employee in an effort to validate or enhance his knowledge of the competition.
- an offeror may attempt to "buy-in" with hopes of making profits on changes.

## 2. Errors, Omissions and Deficiencies

While conducting the evaluation the TEP may encounter errors, omissions and deficiencies, some of which are superficial and easily corrected while others are more serious. Errors are a mistake in calculation or measurement or a minor misconception. An omission is simply a failure to respond to a particular requirement in the RFP.

A deficiency may be any part of an offeror's proposal which: [16:3-24]

- fails to meet the minimum requirements of a standard set forth in the RFP.
- proposes an approach that has unacceptable risk.
- describes an approach taken by the offeror which yields undesirable performance.

### 3. The Evaluation

As stated in Chapter III, after all the efforts to develop a comprehensive and effective evaluation structure, the individual evaluator is still faced with the problem of exactly how to evaluate the proposals. The problem centers on assigning scores in such a manner as to maintain consistency for each evaluator and comparability between the evaluators. Evaluators must not make the mistake of rating the proposals in relation to each other. Individual evaluators tend to choose a single proposal as a base and rate other proposals in relation to the base proposal. Other evaluators may use a mixture of proposals as a base or not have a base. Because the individual evaluators are not evaluating to the same base, their findings are less consistent and comparable.

A well written RFP should have clearly established standards and serve as a single basis against which to compare proposals. The oversimplified procedure is to take each evaluation factor and compare the proposal against the standard in the RFP. Using his judgment and expertise, the variance is determined by the evaluator, described in narrative form, and represented in numerical form. [14:27]

Care must also be taken to ensure that the evaluation does not center just on errors, omissions and deficiencies.

Positive factors that are above the standards can offset other negative factors. Therefore, it is necessary to consider not only what is positive or negative, but also the degree to which it is good or bad. In the case of negative factors, the difficulty of correcting the factor must be fully assessed. The impact of a negative factor may be so great as to make the entire proposal unacceptable or so minor as to be insignificant. In the case of a positive element, the evaluator must determine not only the excess above the standard, but also whether the excess represents a useful value to the Government. [14:29]

#### 4. Requests for Additional Information

The TEP has a natural desire to start the negotiations before they get done with the initial evaluation [11]. TEP members are frustrated by what appear to be simple omissions and errors in the proposals. Regulations permit the TEP to obtain clarifications from the offeror during the evaluation process. The evaluators prefer to request these clarifications as they arise claiming the evaluation cannot proceed until they are clarified. This can result in a continuous stream of questions from the TEP and answers from the offerors flowing through the contracting office. The combined result is the conversion of clarifications into negotiations and extensive delays in completion of the initial evaluation [7].

The TEP must at least exercise restraint and NASA has gone so far as to forbid any questions until negotiations are

formally initiated. NASA evaluators are directed to complete evaluations based on the most reasonable assumptions they can make regarding the proposal areas involved. Their assumptions and the additional information are the subject of oral/written discussions with those firms determined to be in the competitive range. This has the added advantage of avoiding unnecessary communication with offerors outside the competitive range. [20:3-6]

5. Cost/Price Considerations

a. Cost/Price Analysis

Regardless of the type of contract, the relative value of cost/price, or whether cost/price is scored or not scored, a complete analysis of the cost/price proposal is required. It is at this point that the differences in resources available to the major weapons systems activities and the NFAS activities become significant. The major weapons systems activities often have professional cost/price analysts that provide support to the contracting officer and TEP. Only a few cost/price analysts are currently assigned to NFAS activities. At the NFAS activities interviewed, the cost/price analyst function was performed by contract specialists with primary support from the Defense Contract Audit Agency (DCAA) [8].

A DCAA audit is very time consuming with sixty day deliveries being common at the NFAS activities interviewed. The NFAS activities recognize that much of this delay is caused by excessive backlog at DCAA and therefore take measures

to limit the number of DCAA audit requests. The primary method is to delay the request for DCAA audit until after the TEP has completed a preliminary evaluation using qualification factors and searching for grossly deficient proposals. This eliminates the need for DCAA to conduct an unnecessary audit on an offeror that does not have a chance for award. Another method, used primarily on smaller service contracts, is to limit the DCAA audit to a rate verification conducted through the resident DCAA Liaison Office. A rate verification can be completed in only days and is quite sufficient if the offeror has a substantial volume of Government business, material is not involved and rates have not changed. However, if a significant problem in rates is uncovered, a complete audit is necessary [8]. The last method available to reduce the number of DCAA audit requests is to wait until after a complete technical evaluation. This will eliminate those offerors that are not technical acceptable. The goal of the NFAS activities is to hold the number of DCAA audit requests per evaluation to no more than three, if possible [4].

Another major aid in the cost/price analysis is the independent cost estimate (ICE) developed as part of the SSP. Preparation of an ICE is discussed in Chapter II. A well prepared ICE adds another dimension to the cost/price analysis and can be a critical aid if action must be taken without the benefit of a DCAA audit. Unfortunately, the ability or resources of most NFAS activities and their

customers in ICE preparation is limited. Furthermore, an ICE may be inaccurate due to the performance uncertainties inherent particularly in cost type contracts. As a result, GAO has cautioned against undue reliance on the ICE. [47]

Another cost/price analysis method is to compare the cost proposals of all offerors. For fixed price requirements that do not have evaluation factors, this may be the entire basis for the contracting officer's determination that the price is fair and reasonable. However, cost/price analysis has a different objective when used in conjunction with requirements that have evaluation factors. That objective is source selection and a fair and reasonable price determination. The GAO has found that when the cost/price analysis consists of merely comparing the estimated cost proposals submitted by offerors, rational support for the source selection does not exist due to inadequate analysis and assessment. [46]

Cost/price analysis, as required by DAR 3.807.2, may be accomplished in various ways including DCAA audit, comparison against an ICE, and comparison of proposals submitted. GAO encourages the use of all information available at the time of evaluation. [54]

b. Cost Realism/Probable Cost

It is fundamental in the award of a cost type contract that proposed cost be analyzed in terms of cost realism [45]. At the NFAS activities interviewed, cost realism was considered after completion of the technical evaluation by the TEP and completion of the cost analysis by the

contracting personnel. By comparing the technical proposal with the cost proposal, the TEP and contracting personnel determine: [14:52]

- that the offeror's cost estimate is compatible with the technical and management effort proposed.
- that all costs have been included and that estimated costs are relatively valid.
- that the costs are in consonance with the work statements in the RFP.

Significant inconsistencies between the technical proposal and the cost proposal can be considered in two ways. The inconsistencies may raise a fundamental issue concerning the offeror's understanding of the nature and scope of the work required. This may result in appropriate areas of the technical evaluation being re-scored. The evaluators may be able to determine a more probable cost than that proposed by the offeror [6:IV-6]. It is then appropriate to use the probable cost to score or evaluate the cost proposal [58]. Any significant inconsistency will be the subject of negotiations and the burden of proof as to the credibility of the proposed cost rests with the offerors.

Cost realism can also be an important factor in fixed price contracting and a defense against the "buy-in." There is nothing illegal about a "buy-in" and it is not an acceptable basis for rejecting a proposal [9]. However, lack of cost realism can affect the technical evaluation in much the same way as in cost type contracting. Also, if cost is



being separately scored, a cost proposal can be scored lower for lack of cost realism. A few individuals interviewed cautioned against being too heavy handed and attempting to declare an unusually low offeror as unacceptable based solely on lack of cost realism. Much less justification is required for reducing an offeror's score than for removing the offeror from further consideration. In addition, a reduced score is much less likely to provoke a protest. [8]

#### F. RESULTS OF INITIAL EVALUATION

##### 1. Award on Initial Proposals

Part of the boilerplate of any contract is a statement that award may be made on the basis of initial proposals. There are two basic situations that may occur where award on the basis of initial proposals may be appropriate. The urgency of the delivery requirements may not permit negotiations or negotiations simply are not necessary. The Government must demonstrate that adequate competition does exist and that acceptance of the most favorable initial proposal, without further discussion, would result in a fair and reasonable cost/price to the Government. This is proper only if the proposal is accepted exactly as submitted without any negotiations whatsoever.

The decision to award on the basis of an initial proposal is within the discretion of the Government. Although the above conditions may be met, the Government may choose to negotiate for a variety of reasons. The regulations do not

require an award without discussion, they only permit such an award [40:4]. Individuals interviewed stated that award on the basis of initial proposals is not common. However, they considered it important that the offeror fully realize that the possibility of award on the basis of initial proposal does exist. This forces the offeror to put more effort into the initial submission and not depend on the negotiation process to provide clues as to the Government's true desires. Also, it forces the offeror to submit a more realistic cost/price proposal and not hold back for the Best and Final (B&F). The NFAS activities interviewed routinely conduct negotiations and request a B&F and do not actively consider award on the basis of initial proposals [11].

## 2. First Technical Evaluation Report (TER)

The primary objective of the TER is to clearly and objectively state the results of the proposal evaluation by the TEP. This documentation is the only official record showing the logic and rationale used by the TEP members when reaching their conclusion. A brief discussion of significant weaknesses and strengths is to be provided to support the score assigned under each evaluation factor. It is important that a substantive TER be created in order to: [5:4-25]

- provide the contracting officer with the necessary information in order to notify unsuccessful offerors.
- serve to refresh the memories of TEP members during later debriefings with rejected offerors.

- to become the official documentation should the award be questions.
- support the competitive range determination.
- aid in the development of negotiation objectives.

Naturally, if the TEP is recommending an award based on initial proposals, there is no need for the development of negotiation objectives or a competitive range determination. However, it would be prudent to document the reasons why further negotiations are not required or in the best interests of the Government. Contractors often challenge either formally or informally, an award based on initial proposals [11].

While there is no standard format for a TER, certain generalizations can be made. [5:4-26]

- Findings must be supported by rational judgment or technical data.
- Supporting data, findings, technical analysis and judgment statements are to be presented so people with nontechnical backgrounds can understand as much as possible.
- The selection of words should be consistent with the findings of the TEP. An outstanding offer should be described in superlative terms rather than mediocre terms.
- The TER is a summary and great bulk is not required or desired. All supporting data is to be retained as part of the contract file.
- A primary function of the TER is to categorize each proposal as either acceptable, unacceptable but capable of being made acceptable without major revision, or unacceptable.

This is in preparation for the competitive range determination to be made by the contracting officer. Offerors with unacceptable proposals are notified by the contracting

officer and are no longer considered. Each of the remaining offerors are then ranked and it is important that the relative rank be clearly stated. Differences among acceptable proposals are critical factors in the subsequent decisions related to selection of sources for negotiations [5:4-24]. The concepts of "significant difference" and "essentially technically equal" will be discussed later in this chapter.

The TER should address the areas of the remaining proposals which need to be strengthened to correct weaknesses or areas which should be eliminated or reduced to correct excesses. Their recommended changes should be accompanied by appropriate rationale to be used in developing the negotiation objectives.

After the TER is written, reviewed, and signed, it is forwarded to the contracting officer. The contracting officer is responsible for reviewing the accuracy and completeness of the documentation. This review provides a check on the reasoning behind the justification of the proposal ratings and a check that the evaluation was conducted in accordance with the evaluation factors in the RFP. Any nonconforming documentation shall be returned to the TEP for completeness, correction or other remedial action. [20:13-7]

### 3. Competitive Range Determination

The contracting officer is also responsible for selecting those sources with whom negotiations will be conducted. A competitive range decision is based on cost/price, technical and other salient factors and includes all proposals

that have a reasonable chance of being selected for award. A competitive range means that two or more proposals are acceptable for negotiation after evaluation. If there is any doubt as to whether a proposal is in the competitive range, it must be resolved by including it. A summary of the rules pertaining to competitive range determinations is listed in Chapter IV. Those sources found outside the competitive range are labeled unacceptable and are so notified. [5:4-26]

#### G. CONDUCTING THE NEGOTIATIONS

##### 1. Development of Negotiation Objectives

The Government is required to conduct negotiations with all offerors in the competitive range and these negotiations must be meaningful. Normally, negotiations will consist of pointing out those areas in which the proposal is deficient [57]. The common problems encountered in this area are technical leveling and technical transfusion. Technical leveling is the improper use of negotiations resulting in multiple offerors with approximately the same technical score. Technical transfusion is the improper transfer of innovative ideas and approaches from one proposal to another. Obviously, technical transfusion is one of the ways to bring about technical leveling. Another common way is to concentrate negotiation efforts on proposals that are currently unacceptable but capable of being made acceptable. For example, at NRCO, Long Beach a recent protest centered on an offeror that was able to

improve his score from seventy-five to eighty-eight due largely to deficiencies pointed out during negotiations. An offeror with an original score of eighty-five was unable to improve his proposal and protested because the Government failed to point out deficiencies known in his already acceptable, but not perfect proposal [11]. The way to avoid technical leveling is to point out all significant deficiencies in all proposals. What is significant must be determined for each individual case but generally means any deficiency that may affect the source selection results.

Great care should be taken by all Government personnel to prevent technical transfusion. The evaluation of each proposal against the standards set forth in the RFP instead of against each other is a great aid in this effort. Each deficiency is expressed in terms of how it fails to meet a standard or is in great excess of a standard. Deficiencies are not expressed in terms of how another proposal is superior. Evaluation to standards assists the conversion of deficiencies to negotiation objectives without technical transfusion. If it is not possible to discuss an inadequate area without technical transfusion, then negotiations concerning that area cannot be held. [57]

Another consideration is later requests for information under the Freedom of Information Act (FOIA). TEP members should write all proposal evaluations recognizing that after award the evaluation report may be provided to the offeror

that submitted the proposal. This may result in technical transfusion if the evaluation report contains references to other proposals.

The selection of negotiation objectives will not be difficult if an orderly method of identification, description and recording of errors, omissions and deficiencies has been followed during the evaluation process. The negotiation objective may also address scheduling, cost/price considerations, incentive arrangements or special provisions to be incorporated into the contractual document. The contracting officer is ultimately responsible for selecting the negotiation objectives. [16:3-26]

## 2. Strategies and Tactics

Many individuals have placed a lot of weight on negotiation strategies and tactics but adequate preparations outweighs any maneuvers used during negotiations. The contracting officer will represent the Government in any negotiation and will determine the strategies and tactics to be used. Each contracting officer has an individual style for conducting negotiation. Therefore, it is important that any TEP member asked to participate fully understands how the contracting officer intends to run the negotiations. In particular, the TEP member must understand whether he has a free rein to talk or if he must wait for approval from the contracting officer before engaging in discussions. Much will depend on the atmosphere of the negotiations. [5:4-29]

Conducting negotiations with several offerors in a competitive procurement action is a very complex process with severe restrictions brought about by the requirements for equal treatment of offerors, the prevention of technical trans- fusion and the prohibitions against auction techniques. This requires a more structured approach to the preparation for negotiations and a more disciplined participation by TEP mem- bers than would be used in sole source negotiations. The cost and fee area, which is the primary area of concern in a sole source procurement, becomes secondary to the technical nego- tiations. This is largely due to the Government assumption that cost and fee are being held down by the pressures of compe- tition and the greater weight assigned to technical factors.

[5:4-30]

### 3. Best and Final (B&F)

There are two somewhat unrelated goals of the negotia- tion process. Both the technical and cost/price evaluators are attempting to gather information in order to complete the evaluation process and the contracting personnel are attempting to finalize the terms and conditions of the resultant contract. The evaluators always want and can use additional information and usually are forced to complete the evaluation based on incomplete data. At the end of the negotiation process, the NFAS activities interviewed request revised proposals to be received by a common cutoff date. Then the revised proposals are used to complete the evaluation process. Previously



unacceptable offerors that were capable of being made acceptable are now categorized as either acceptable or not acceptable. A final competitive range determination is made. The contracting personnel review the proposals of all offerors in the competitive range to ensure there are no unacceptable terms and conditions. All unsuccessful offerors are notified.

[4]

The remaining offerors in the competitive range are then given one final opportunity to submit revisions which again must be received by a common cutoff date. This is the Best and Final (B&F) request and must be clearly identified as such. Offerors have a right to know that negotiations have concluded, that B&F proposals are being called for and the common cutoff date for receipt. [16:3-29]

In less complex requirements, the submission of revised proposals and the request for B&F proposals are compressed into one request for B&F proposals. However, there is nothing to prevent an offeror from suddenly taking exception to a particular term or condition or revising a previously acceptable proposal in a way that makes it unacceptable. These problems may not be able to be resolved without negotiating with the offeror but if negotiations are conducted with one offeror, they must be conducted with all offerors. Therefore, it may be in the best interest of the Government to ask for another round of B&F proposals. This leads to charges of auctioning and delays the award, but is permitted where justified or necessary. [40:7]

#### H. FINAL EVALUATIONS AND DOCUMENTATION

The final evaluation shall take into account the results of the oral/written negotiations and any proposal revisions submitted by offerors as a part of their B&F proposals. The offeror may respond to a notification of a weakness, omission, or deficiency in one of three ways. The offeror may disagree that a deficiency exists, furnish rebuttal information to substantiate the original position, and stand on the proposal as submitted. The offeror may agree that a deficiency exists but, because of previously considered trade-offs, the correction of the deficiency may cause loss of some other capability considered to be more valuable and determine to propose with the noted deficiency. Finally, the offeror may agree that a deficiency exists and furnish a correction. [14:47]

The final evaluation is normally conducted as an update of the first evaluation and not a totally new evaluation. Care must be taken to evaluate the impact of revision to proposals not only in the area of the original deficiency but in all areas of the proposal. The final documentation is in the form of a second part of the TER. The documentation must clearly reflect the effect of negotiations and explain the basis for any scoring changes that were made [20:13-6]. The final scores and documentation must reflect the integrated collective judgment of the TEP as to the competitive standings of the offerors overall [12:4-13].

AD-A109 686

NAVAL POSTGRADUATE SCHOOL MONTEREY CA  
PROPOSED SYSTEM FOR THE USE OF EVALUATION FACTORS IN THE SOURCE--ETC(U)  
SEP 81 R D PINNELL

F/G 5/1

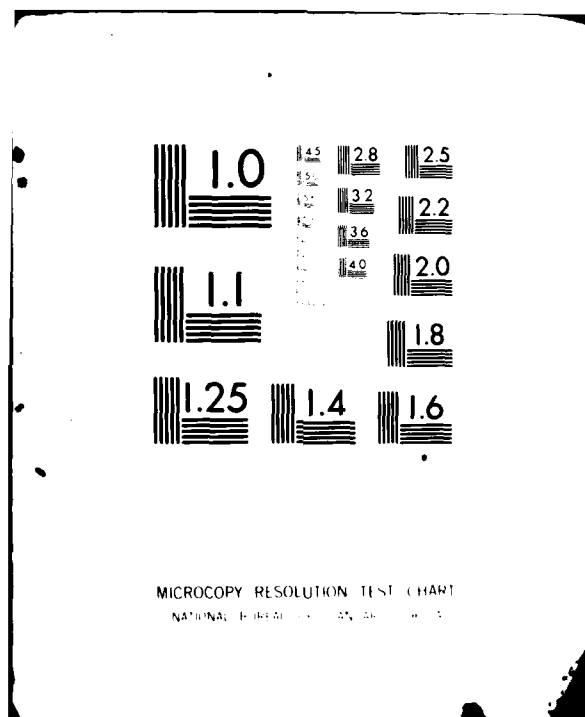
NL

*unclassified*

202  
AD 109 686



END  
DATE  
FILMED  
DTIC



## I. ULTIMATE RESPONSIBILITY FOR SOURCE SELECTION

In any requirement where evaluation factors other than price are used and award is based on the technical competency of contractors, the primary effort in source selection is made by the TEP members. They alone are presumed capable of conducting the review of proposals and recommending and documenting the award. However, the ultimate responsibility for choice of a contractor remains with the contracting officer, the only person who can legally bind the Government to a contract. The law, regulations and sensible practices all require that, in the last analysis, the contracting officer must weight all the evidence, recommendations, and other documentation and assume the full weight of the ultimate choice. [2:51]

Problems usually result when two or more proposals are evaluated very close to each other. The proposals may be either "essentially technically equal" or a "significant difference" may exist. The contracting officer may make a formal determination backed by factual data that the proposals are essentially technically equal. This is in recognition that the proposal evaluation is sensitive only to a certain degree. Of the proposals determined to be equal, award is then made to the lowest priced proposal [59]. Whether a significant difference exists depends on the facts and circumstances of each procurement [61].

Depending on the contract type and dollar value of the proposed contract, several levels of review may be required prior to award. The contracting officer may try to expedite

the process, but he has little or no control over the reviewers. The time for the reviews is subject to the workload of the reviewers. [5:4-3]

## J. UNSUCCESSFUL OFFERORS

### 1. Notification

There are three basic reasons why and three basic times when an offeror may be notified that his proposal is unsuccessful. A proposal may be unacceptable, acceptable but outside the competitive range or acceptable but simply not selected for award. The offeror must be promptly notified that his proposal is no longer being considered for contract award. A notification stating that the proposal was unacceptable shall cite the appropriate reasons. [12:4-15]

### 2. Debriefing

The basic purpose of a debriefing is to furnish information that should permit the offeror to submit a better proposal in the future. Government personnel may also learn valuable information, therefore, a debriefing is often in the best interests of the Government. Any debriefing is to be conducted by the contracting officer with necessary support provided by the TEP members. The debriefings are not to be conducted until after contract award and with only one offeror at a time. The debriefing generally consists of a general discussion of the offeror's proposal, its weak and strong points in relation to the requirements of the RFP and not relative to the other proposals [14:66]. It is imperative

that the TEP members be cautioned not to discuss other proposals and to refrain from implying that the evaluation was conducted using any factors other than those set forth in the RFP [54].

The offerors should be encouraged to submit written questions to the Government prior to the actual debriefing. This will allow a much more efficient use of time during the debriefing. Of utmost importance in debriefing discussions is the use of tact. The TEP member should answer appropriate questions pertaining to the defects found in the proposal in a straightforward manner. At the conclusion of the debriefing, the contracting officer should develop a record of the debriefing including the questions asked, the answers given and any other appropriate data. [14:67]

## VII. SUMMARY AND RECOMMENDATIONS

### A. SUMMARY

As an aid to the technical evaluator, a model of the major phases and significant events in the proposal evaluation and source selection process is provided as figure 10. Various administrative and review events internal to the contracting activity are not included. Individual procurement actions may have minor variations from the model. For example, award on initial offers would eliminate several significant events.

Although it is obviously better for a technical evaluator to become involved in a particular acquisition as early as possible, he may enter the process at any one of the five phases. Most often, they enter in the early stages of the pre-solicitation phase. It is imperative that the technical evaluator understand what phase he is in and the resulting constraints with each phase.

#### 1. Phase I Pre-procurement Request

The importance of an informed start cannot be over emphasized. Initially, technical personnel should be encouraged to describe the desired services free of constraints in order to promote innovation and the identification of needs. Open communication with private industry and contracting personnel is important in order to gather the necessary information. However, as the requirement starts to take shape,



Model of Major Events in Source Selection

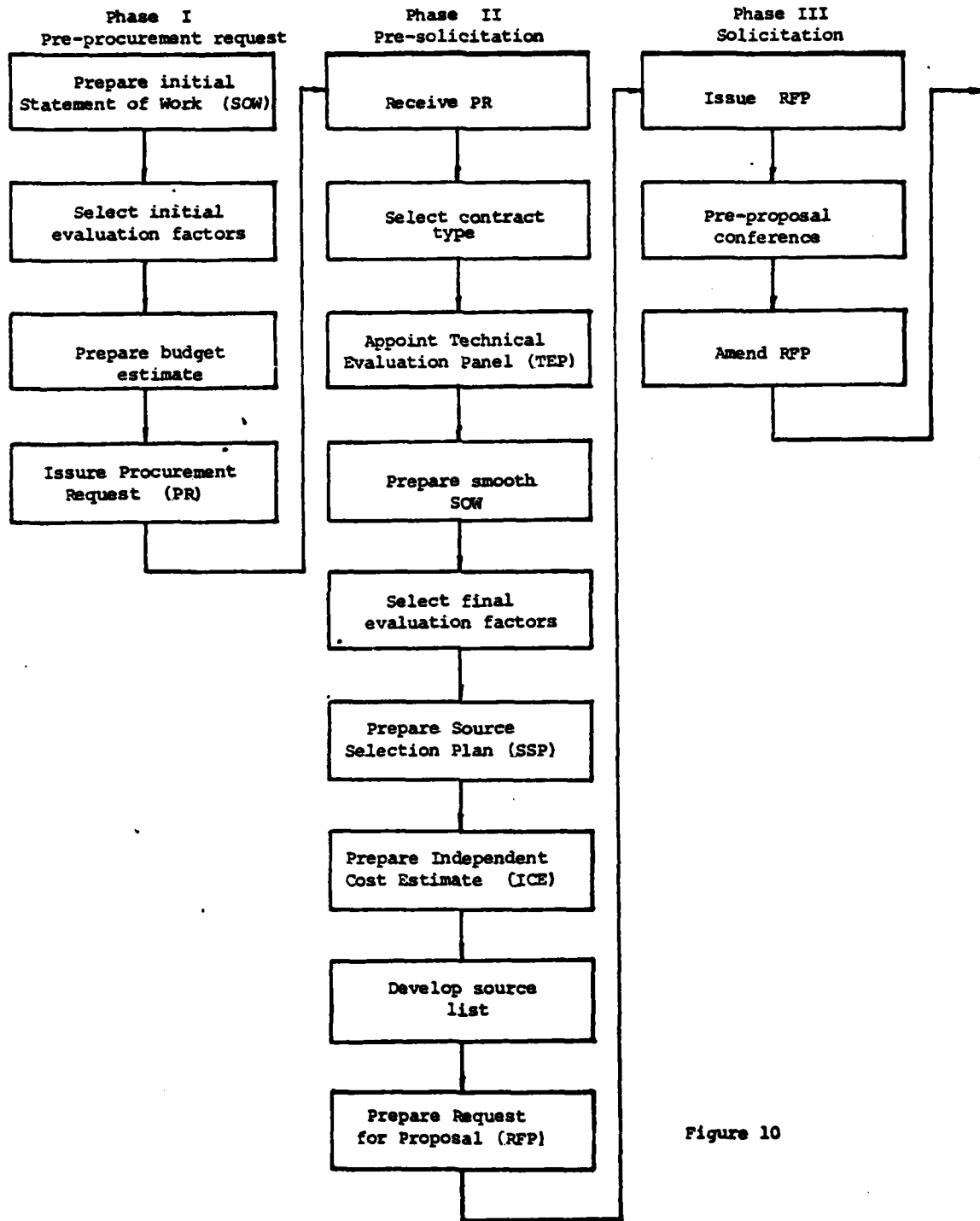


Figure 10

Model of Major Events in Source Selection

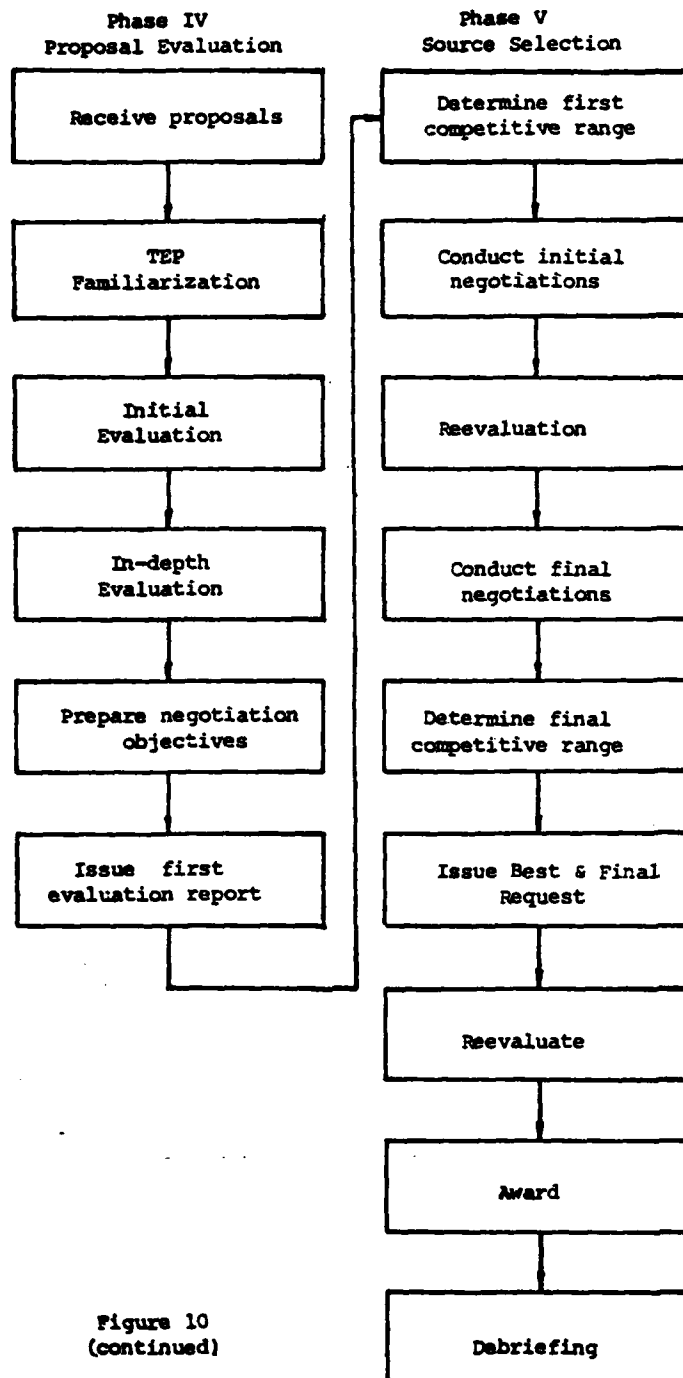


Figure 10  
(continued)

communication with private industry becomes more constrained in order not to give a competitive advantage to any particular contractor.

As soon as a significant requirement for services is firm enough to provide a basic description, contracting personnel should be contacted to discuss the potential for competition, type of contract, and source selection method. If the source selection method chosen requires the use of evaluation factors, contracting personnel should fully explain their proper use. The statement of work (SOW) should be written with standards that consistently establish a particular quality level. Evaluation factors selected must be consistent with the SOW and the established standards. The procurement request (PR) must also include a budget estimate of the funds required.

## 2. Phase II Pre-solicitation

The pre-solicitation phase starts with the receipt of the PR by the NFAS activity and ends when the Request for Proposal (RFP) is issued. This phase is critical for successful source selection because of its impact on future events and activities. Sufficient time should be provided for planning and preparation. The contract type is a major consideration of potential offerors. The selection of competent and qualified Technical Evaluation Panel (TEP) members influences the quality of the evaluations and ultimate source selection. The SOW and evaluation factors selected impact the ability of potential offerors to submit proposals that meet the

needs of the Government. The Source Selection Plan (SSP), which includes evaluation factors, weights, scoring system, and proposed event milestones, impacts the smoothness and objectivity of the source selection. The issuance of the RFP sets the terms and conditions of the source selection process for each procurement action, which cannot be changed unless the RFP is revised. [73-6]

### 3. Phase III Solicitation

The solicitation phase is normally the most stable of the five phases. However, the pre-proposal conference and other communication with contractors provide an opportunity to prevent potential problems that may arise in later phases. The solicitation document may require amendment or the SSP may need to be revised.

### 4. Phase IV Evaluation

The evaluation phase begins with the receipt of proposals but does not have a natural ending. Evaluations may continue right up until the award decision is finalized. Grossly deficient or clearly inferior proposals may be eliminated at any time from further consideration. The evaluation phase has a dual purpose of ranking the proposals received and determining appropriate negotiation objectives. A complete record is maintained and made a part of the contract file.

## 5. Phase V Source Selection

The source selection phase starts with the completion of the initial proposal evaluation. Several important decisions are necessary in the sequence leading up to the final source selection decision. The competitive range determination is a decision to limit further negotiations to those proposals considered to stand a reasonable chance of subsequent contract award. Another major decision is the extent to which written or oral negotiations should be conducted to give the offerors the opportunity to clarify, correct or improve their respective proposals. These decisions greatly affect the final source selection decision and provide fertile areas for contractor dissatisfaction and protest.

### B. RECOMMENDATIONS

#### 1. Simple Multi-attribute Rating Technique (SMART)

It is recommended that the SMART method of evaluation be reviewed for adoption by the Naval Supply Systems Command. Because SMART is specifically designed for the non-professional analyst, it is uniquely suited to proposal evaluation at NFAS activities. Most NFAS activities currently use a similar system and could easily adapt to SMART. A single, well documented technique such as SMART would improve the quality of evaluations and provide consistency within and between activities.

## 2. Source Selection Plan (SSP)

It is recommended that NFAS activities be encouraged to use formal Source Selection Plans (SSP) with established event milestones when evaluation factors are being used. This would encourage a greater effort in the planning states and aid in the administration of the proposal evaluation and source selection process. It would also promote coordination between the statement of work and the evaluation factors.

## 3. Summary of Rules

It is recommended that a more complete summary of the rules pertaining to proposal evaluation, source selection, and service contracting be prepared and maintained by the Office of Legal Counsel, Naval Supply Systems Command. The potential for protest can be reduced by appropriate planning if precedents set by GAO are known to field technical and contracting personnel. Preparation and review by counsel is necessary to provide validity and to keep the summary current.

## 4. Guide for Technical Personnel

It is recommended that the Naval Material Command issue a guide for technical personnel in order to assist them in their duties as proposal evaluators. A need for guidance and training was universally recognized by all individuals interviewed at NFAS activities. A guide was considered more desirable than a training course because it can be more widely distributed. This guide should contain essentially the same

information as contained in this research effort, but in a compressed, easy to read form.

#### LIST OF REFERENCES

1. Interview with Mr. William Baker, Supervisor Contract Specialist, Naval Weapons Center, China Lake, CA, 14 November 1980.
2. Naval Material Command, Defense Contracts Management for Technical Personnel, Washington, D.C., January 1981.
3. Naval Supply Center, Charleston, Lesson Plan for Training Contracting Officer's Technical Representatives (COTR), Charleston, SC, December 1979.
4. Interview with Ms. Pat Walker, Supervisor Contract Specialist, Naval Supply Center, Oakland, CA, 4 May 1981.
5. U. S. Army Material Development and Readiness Command, Contract Management Guidance for Technical Personnel, Alexandria, VA, draft copy, undated.
6. Sterling Institute, The Preparation and Processing of Purchase Requests, undated, prepared for Naval Air Development Center, Warminster, PA.
7. Interview with CDR Ray CHALUPSKI, SC, USN, Contracting Officer, Naval Supply Center, Oakland, CA, 4 May 1981.
8. Interview with CDR Don MAYES, SC, USN, Assistant Officer in Charge, Naval Regional Contracting Office, Long Beach, CA, 18 June 1981.
9. Interview with Mr. Don Safford, Legal Counsel, Naval Regional Contracting Office, Long Beach, CA, 19 June 1981.
10. U. S. Comptroller General, B-188916, 7 August 1977.
11. Interview with Mr. Gene Cornish, Supervisor Contract Specialist, Naval Regional Contracting Office, Long Beach, CA, 19 June 1981.
12. National Aeronautics and Space Administration, Source Evaluation Board Manual, (through change 2), 25 January 1980.
13. U. S. Comptroller General, B-191162, 14 June 1978.
14. Shaw, Graham, Source Selection Process Handbook for the Air Force Space Division, Unpublished M.S. Thesis, Air University, Maxwell AFB, AL, May 1980.



15. Interview with Mr. Paul Shaw, Supervisor Contract Specialist, Naval Regional Contracting Office, Long Beach, CA, 17 June 1981.
16. U. S. Army Material Development and Readiness Command, Procurement Proposal Evaluation and Source Selection, Alexandria, VA, October 1980.
17. U. S. Comptroller General, B-182421, 3 July 1975.
18. Office of Federal Procurement Policy, A Guide for Writing and Administering Performance Statements of Work for Service Contracts, OFPP pamphlet no. 4, October 1980.
19. U. S. Department of Energy, Project Manager's Guide for Preparation of Procurement and Financial Assistance Requests, DOE/PR 0040, Washington, D.C., December 1980.
20. National Aeronautics and Space Administration, JSC Procurement Supplement to NASA Procurement Regulation No. 99, 20 February 1980.
21. U. S. Comptroller General, B-187489, 29 March 1977.
22. Brown, Rex V.; Kahr, Andrew S.; and Peterson, Cameron, Decision Analysis: An Overview. New York: Holt, Rinehart and Winston, 1974.
23. Quade, E.S., Analysis for Public Decisions, New York: Elsevier North Holland, Inc., 1975.
24. Interview with Dr. Ward Edwards, Director Social Science Research Institute, University of Southern California, Los Angeles, CA. 17 June 1981.
25. Edwards, Ward, and Newman, J. Robert, The Evaluation of Criminal Justice Programs: An Approach to the Use of Multiattribute Utility Technology, (unpublished), November 1980.
26. U. S. Comptroller General, B-193240, 29 May 1979.
27. Easton, Allan, Complex Managerial Decisions, New York: John Wiley & Sons, Inc., 1973.
28. Edwards, Ward, "Multiattribute Utility for Evaluation: Structures, Uses, and Problems." In Handbook of Criminal Justice Evaluation, pp. 177-215. Edited by M. Klein and K. Teilmann. Beverly Hills: Sage Publications, 1980.

29. Beard, Major Robert J., The Application of Multi-Attribute Utility Measurement (MAUM) to the Weapons Systems Source Selection Process, Unpublished M.S. Thesis, Air University, May 1980.
30. Mac Crimmon, K. R., Decisionmaking Among Multiple-Attribute Alternatives: A Survey and Consolidated Approach, Santa Monica: The Rand Corporation, 1968.
31. Smith, Samuel O., The Role of the Comptroller General, Unpublished M.S. Thesis, Florida Institute of Technology, March 1974.
32. U. S. Comptroller General, B-194717, 4 September 1979.
33. U. S. Comptroller General, B-180245, 9 May 1974.
34. U. S. Comptroller General, B-186001, 22 December 1976.
35. Femino, Dominic A., and Smail, Lawrence M., "Disclosure of Evaluation Factors and Their Relative Weights: A Continuing Procurement Problem," National Contracts Management Journal, v. 11, p. 15-24, Winter 1977-1978.
36. U. S. Comptroller General, B-196279, 7 February 1980.
37. U. S. Comptroller General, B-179703, 26 April 1974.
38. U. S. Comptroller General, B-190760, 15 March 1978.
39. U. S. Comptroller General, B-193245, 10 May 1979.
40. Shnitzer, Paul A., "Competitive Negotiations," Briefing Papers, no. 75-4, August 1975.
41. U. S. Comptroller General, B-197866, 14 May 1980.
42. U. S. Comptroller General, B-197099, 20 May 1980.
43. U. S. Comptroller General, B-193477, 9 August 1979.
44. U. S. Comptroller General, B-177280, 16 July 1973.
45. U. S. Comptroller General, B-188272, 30 November 1977.
46. U. S. Comptroller General, B-186311, 26 August 1976.
47. U. S. Comptroller General, B-196287, 1 April 1980.
48. U. S. Comptroller General, B-194734, 22 August 1979.

49. U. S. Comptroller General, B-194802, 3 October 1979.
50. U. S. Comptroller General, B-191346, 20 March 1979.
51. U. S. Comptroller General, B-197002, 5 June 1980.
52. U. S. Comptroller General, B-188550, 4 August 1977.
53. U. S. Comptroller General, B-196158, 24 January 1980.
54. U. S. Comptroller General, B-190023, 31 January 1978.
55. U. S. Comptroller General, B-196682, 23 April 1980.
56. U. S. Comptroller General, B-178205, 15 July 1975.
57. U. S. Comptroller General, B-190178, 6 July 1978.
58. U. S. Comptroller General, B-192930, 7 May 1979.
59. U. S. Comptroller General, B-188372, 22 September 1977.
60. U. S. Comptroller General, B-194388, 10 August 1979.
61. U. S. Comptroller General, B-193154, 15 May 1979.
62. U. S. Comptroller General, B-197002, 5 June 1980.
63. Van Brockhoven, R.A., Memorandum on GAO Bid Protest B-195815, 8 November 1979, Counsel for the Naval Supply Systems Command, Washington, D.C.
64. U. S. Department of Energy, Procurement Regulations Handbook Source Evaluation Board, DOE/PR-0027, Washington, D. C., June 1979.
65. Keeney, Ralph L., and Raiffa, Howard, Decisions with Multiple Objectives: Preferences and Value Tradeoffs. New York: John Wiley & Sons, Inc., 1976.
66. Williams, Robert F., "Problems in Numerical Input for the Source Selection Decision," Defense Systems Management Review, Summer 1980, pp. 122-128.
67. Heim, Jonathan A., "The Contracting Officer and Consultants," Contract Management, May 1980, pp. 20-21.
68. Helman, Theodore, and Taylor, Robert L., "A Conceptual Model for Evaluating Contractor Management During Source Selection," National Contract Management Journal, Winter 1976-77, pp. 88-108.

69. Telephone interview with Mr. Ronald Burger, Procurement Division, General Accounting Office, Washington, D.C., 22 January 1981.
70. Defense Acquisition Regulations, 1976 Edition, Department of Defense, Washington, D.C.
71. Interview with Mr. John Tim, Supervisor Contract Specialist, Naval Supply Center, Oakland, CA, 4 May 1981.
72. Keeling, Gerald F., "The Games People Play in Source Selection Competitions," National Contract Management Journal, Winter 1976-77, pp. 121-131.
73. Williams, Robert F., and Heuerman, Richard D., Proposal Evaluation in Nonmajor Procurements, Unpublished M.S. Thesis, U. S. Army Procurement Research Office Institute of Logistics Research, U. S. Army Logistics Management Center, Fort Lee, VA, December 1974.

# INITIAL DISTRIBUTION LIST

	No. Copies
1. Defense Technical Information Center Cameron Station Alexandria, Virginia 22314	2
2. Library, Code 0142 Naval Postgraduate School Monterey, California 93940	2
3. Defense Logistics Studies Information Exchange U. S. Army Logistics Management Center Fort Lee, Virginia 23801	1
4. Department Chairman, Code 54 Department of Administrative Sciences Naval Postgraduate School Monterey, California 93940	1
5. CDR M. L. Sneiderman, SC, USN, Code 54Zz Department of Administrative Sciences Naval Postgraduate School Monterey, California 93940	5
6. Asst. Professor R. G. Nickerson, Code 54No Department of Administrative Sciences Naval Postgraduate School Monterey, California 93940	1
7. LCDR R. D. Pingel, SC, USN, Code 200 Naval Supply Center, Puget Sound Bremerton, Washington 98314	3
8. LCDR J. R. Berquist, SC, USN, Code 54Za Department of Administrative Sciences Naval Postgraduate School Monterey, California 93940	1
9. Professor Ward Edwards, Director Social Science Research Institute University Park Los Angeles, California 90007	1
10. Mr. Gene Cornish, Code CDB Naval Regional Contracting Office Long Beach, California 90822	1

11. Mr. Paul Shaw, Code CDB-1 1  
Naval Regional Contracting Office  
Long Beach, California 90822
12. CAPT Dennis F. Fish, SC, USN, Code SUP 02 1  
Navy Supply Systems Command  
Department of the Navy  
Washington, D. C. 20376
13. Office of Counsel, Code SUP-93 1  
Navy Supply Systems Command  
Department of the Navy  
Washington, D. C. 20376
14. Ms. Pat Walker, Code 201A 1  
Naval Supply Center  
Building 3114E  
Oakland, California 94625
15. Mr. R. C. Courtney, Code MAT 021X 1  
Headquarters, Naval Material Command  
Washington, D. C. 20360
16. Mr. James B. Scanlon 1  
Sterling Institute RDC  
1010 Wisconsin Ave., N.W.  
Washington, D. C. 20007
17. Asst. Professor William F. Moroney, Code 55Mp 1  
Department of Operations Research  
Naval Postgraduate School  
Monterey, California 93940
18. Mr. Sid Kachel, Code 680 1  
Defense Communications Agency  
Washington, D. C. 20305
19. LCDR T. L. Bollman 1  
Supply Department  
Naval Air Station  
Patuxent River, Maryland 20670

FILMED  
2-8